

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 08-08-2013		2. REPORT TYPE N/A		3. DATES COVERED (From - To) N/A	
4. TITLE AND SUBTITLE Environmental Assessment (EA): Proposed Training Facilities, Hill Air Force Base, Utah				5a. CONTRACT NUMBER FA8201-09-D-0002	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Klein, Randal Johnson, Sam				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Streamline Consulting, LLC 1713 N. Sweetwater Lane Farmington, Utah 84025				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Hill Air Force Base 7274 Wardleigh Road Hill AFB UT 84056				10. SPONSOR/MONITOR'S ACRONYM(S) 75 CEG/CEN	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release, distribution unlimited.					
13. SUPPLEMENTARY NOTES The original document contains color images.					
14. ABSTRACT Hill Air Force Base (AFB) proposes to construct new training facilities at Hill Air Force Base, Utah. The findings of this EA indicate that the proposed action would not have significant adverse effects on the human environment or any of the environmental resources as described in the EA. Therefore, it is concluded that a Finding of No Significant Impact is justified.					
15. SUBJECT TERMS Environmental Assessment, Hill Air Force Base					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 59	19a. NAME OF RESPONSIBLE PERSON Randal B. Klein
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			19b. TELEPHONE NUMBER (include area code) (801) 451-7872



Hill Air Force Base, Utah

Final

**Environmental Assessment:
Proposed Training Facilities,
Hill Air Force Base, Utah**

August 8, 2013

Final
**Environmental Assessment (EA):
Proposed Training Facilities,
Hill Air Force Base, Utah**

**Contract No. FA8201-09-D-0002
Delivery Order No. 0054**

**Department of the Air Force
Air Force Materiel Command
Hill Air Force Base, Utah 84056**

August 8, 2013

Prepared in accordance with the Department of the Air Force Environmental Impact Analysis Process (EIAP) 32 CFR Part 989, Effective July 6, 1999, which implements the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) regulations.

EXECUTIVE SUMMARY

Purpose and Need

The purpose of the proposed action is to provide new training facilities for the United States Air Force (USAF) and United States Navy (USN). Hill Air Force Base (AFB) provides training related to repairing composite military aircraft. The USN trains reservists to maintain constant readiness for rapid deployment.

The existing USAF facilities are widely separated and outdated. Training time is wasted as students travel from the aircraft production area to various training sites. The facilities do not adequately house required instructors and students, nor do they meet antiterrorism /force protection (ATFP) requirements. The existing USN facility is undersized. It does not meet ATFP requirements or the *Global Shore Infrastructure Plan* (GSIP) recommendation to be located within a Department of Defense (DOD) installation.

Selection Criteria

The USAF and USN training facilities should:

- be adequately sized
- comply with ATFP requirements
- comply with GSIP Recommendations
- be located on one site (USAF) and near the population being served (USN)
- comply with the Hill Air Force Base (AFB) General Plan
- comply with federal, state, and local environmental regulations

Scope of Review

The issues that were identified for detailed consideration are: air quality, solid and hazardous wastes (including liquid waste streams), and water quality.

Alternatives Considered in Detail

Alternative A (No Action Alternative) - Under the no action alternative, new training facilities would not be constructed, and adequate facilities would not be provided. The existing facilities would operate as they currently exist.

Alternative B (Proposed Action - Construct Training Facilities) - The proposed action would include:

- three USAF 23,000 square foot each, two-story buildings (constructed in phases) with structural steel frames, reinforced concrete foundations, concrete floor slabs, mechanical and electrical systems, water and fire protection systems, and communications networks;
- one USN 37,000 square foot single-story building with a structural steel frame, reinforced concrete foundations, concrete floor slabs, mechanical and electrical systems, water and fire protection systems, and communications networks; and
- associated parking lots and connections to adjacent buried utilities.

In addition to constructing new training facilities, Buildings 250, 816, 1221, 1231, and 1279 would be demolished on Hill AFB in support of USAF's physical plant strategy, which calls for reducing net facility footprint by 20 percent between 2006 and 2020 by demolishing surplus and inefficient facilities.

Results of the Environmental Assessment

Two alternatives were considered in detail. The results of the environmental assessment are summarized in the following table.

Summary of Predicted Environmental Effects

Issue	Alternative A No Action	Alternative B Proposed Action
Air Quality	Existing air emissions are 0.24 tons per year or less for each criteria pollutant as well as for hazardous air pollutants (HAPs).	Qualified asbestos abatement contractors would prevent impacts to air quality. Construction equipment would create temporary emissions. Fugitive dust would be controlled. Air emissions from operations would be less than 0.8 tons per year for each criteria pollutant as well as for HAPs. Conformity with the Clean Air Act was demonstrated.
Solid and Hazardous Waste	Only non-regulated wastes exist; if not recyclable, they are collected and disposed.	If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facilities.
Water Quality	Good housekeeping measures and other best management practices are being followed.	During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Good housekeeping measures and other best management practices would be incorporated into facility design and operations.

Identification of the Preferred Alternative

Hill AFB prefers Alternative B (the proposed action).

TABLE OF CONTENTS

1	Purpose of and Need for Action.....	1
1.1	Introduction.....	1
1.2	Proposed Action.....	2
1.3	Need for the Action.....	2
1.4	Purposes of the Proposed Action	3
1.5	Relevant EISs, EAs, Laws, Regulations, Plans, and Other Documents	3
1.6	Decisions That Must Be Made.....	4
1.7	Scope of this Environmental Analysis	5
1.7.1	History of the Planning and Scoping Process	5
1.7.2	Issues Studied in Detail.....	5
1.7.3	Issues Eliminated From Further Study	6
1.8	Applicable Permits, Licenses, and Other Coordination Requirements.....	8
2.0	Alternatives, Including the Proposed Action.....	9
2.1	Introduction.....	9
2.2	Description of Alternatives	9
2.2.1	Alternative A: No Action.....	9
2.2.2	Alternative B: Proposed Action - Construct Training Facilities.....	9
2.2.3	Alternative C: Improve Existing Facilities	12
2.2.4	Alternative D: Construct Training Facilities Off Hill AFB	12
2.3	Process Used to Develop the Alternatives	13
2.3.1	Alternative Selection Criteria	13
2.3.2	Alternatives Eliminated From Detailed Consideration.....	14
2.4	Summary Comparison of the Alternatives and Predicted Achievement of the Project Objectives	15
2.4.1	Summary Comparison of Project Alternatives	15
2.4.2	Predicted Achievement of Project Objectives	16
2.5	Identification of the Preferred Alternative.....	16
3.0	Affected Environment	17
3.1	Introduction.....	17
3.2	Description of Relevant Facilities and Operations	17
3.3	Description of Relevant Affected Issues.....	17
3.3.1	Air Quality	17
3.3.2	Solid and Hazardous Wastes.....	24
3.3.3	Water Quality.....	25
3.4	Description of Relevant Pre-Existing Environmental Factors	25
3.5	Description of Areas Related to Cumulative Effects	25

4.0	Environmental Consequences.....	27
4.1	Introduction.....	27
4.2	Predicted Effects to Relevant Affected Resources	27
4.2.1	Predicted Effects to Air Quality.....	27
4.2.2	Predicted Effects to Solid and Hazardous Waste.....	32
4.2.3	Predicted Effects to Water Quality	35
4.3	Summary Comparison of Predicted Environmental Effects	37
5.0	List of Preparers	38
6.0	List of Persons and Agencies Consulted	39
7.0	References	40

LIST OF FIGURES

Figure 1:	Location of the Proposed Action on Hill AFB.....	1
Figure 2:	Boundary of Proposed Facilities and Parking Areas.....	10
Figure 3:	Location of Proposed Demolitions on Hill AFB.....	12
Figure 4:	State of Utah Areas of Non-Attainment for PM-10	18
Figure 5:	State of Utah Areas of Non-Attainment for PM-2.5	19
Figure 6:	State of Utah Areas of Non-Attainment for SO ₂	20
Figure 7:	State of Utah Maintenance Areas for Ozone.....	21
Figure 8:	State of Utah Maintenance Areas for CO.....	22

LIST OF TABLES

Table 1: Predicted Achievement of Project Objectives	16
Table 2: Baseline Air Pollutants	23
Table 3: Existing Air Emissions Due to Steam Heating (tons/year)	23
Table 4: Existing Air Emissions Due to Furnace (tons/year)	24
Table 5: Heavy Equipment Emissions, Construct USAF Consolidated Training Center.....	28
Table 6: Heavy Equipment Emissions, Construct NOSC Training Facility.....	29
Table 7: Heavy Equipment Emissions for Demolition	30
Table 8: Predicted Air Emissions Due to Space Heating	31
Table 9: Summary Comparison of Predicted Environmental Effects.....	37

LIST OF APPENDICES

Appendix A: Cultural Resources Finding of No Adverse Effect	
---	--

LIST OF ACRONYMS AND CHEMICAL TERMS

AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
AFOSH	Air Force Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zone
ALC	Air Logistics Complex
ATFP	Antiterrorism Force Protection
bgs	Below Ground Surface
BTU	British Thermal Unit
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CNIC	Commander Navy Installations Command
CO	Carbon Monoxide
CTO	Central Training Office
CWA	Clean Water Act
DAQ	Division of Air Quality (Utah)
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EPA	Environmental Protection Agency (United States)
ft ²	Square Feet
GSIP	Global Shore Infrastructure Plan
HAP	Hazardous Air Pollutant
hr	Hour
HWCF	Hazardous Waste Control Facility
IDT	Interdisciplinary Team
lb	Pound
LBP	Lead Based Paint

MBTA	Migratory Bird Treaty Act
MILCON	Military Construction
MMSCF	Million Standard Cubic Feet
MS4	Municipal Separate Storm Sewer System
MTBE	Methyl Tertiary-Butyl Ether
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOSC	Navy Operational Support Center
NO _x	Oxides of Nitrogen
O ₃	Ozone
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PM-10	Particulates Smaller Than 10 Microns in Diameter
PM-2.5	Particulates Smaller Than 2.5 Microns in Diameter
ppm	Parts Per Million
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO _x	Oxides of Sulfur
SPCC	Spill Prevention Control and Countermeasures
SWPPP	Stormwater Pollution Prevention Plan
TCE	Trichloroethene
TCLP	Toxicity Characteristic Leaching Procedure
UAC	Utah Administrative Code
US	United States
USAF	United States Air Force
USC	United States Code
USN	United States Navy
VOC	Volatile Organic Compound
WFRC	Wasatch Front Regional Council

1 PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

Hill Air Force Base (AFB) is located approximately 25 miles north of downtown Salt Lake City and seven miles south of downtown Ogden, Utah (Figure 1). Hill AFB is surrounded by several communities: Roy and Riverdale to the north; South Weber to the northeast; Layton to the south; and Clearfield, Sunset, and Clinton to the west. The base lies primarily in northern Davis County with a small portion located in southern Weber County.

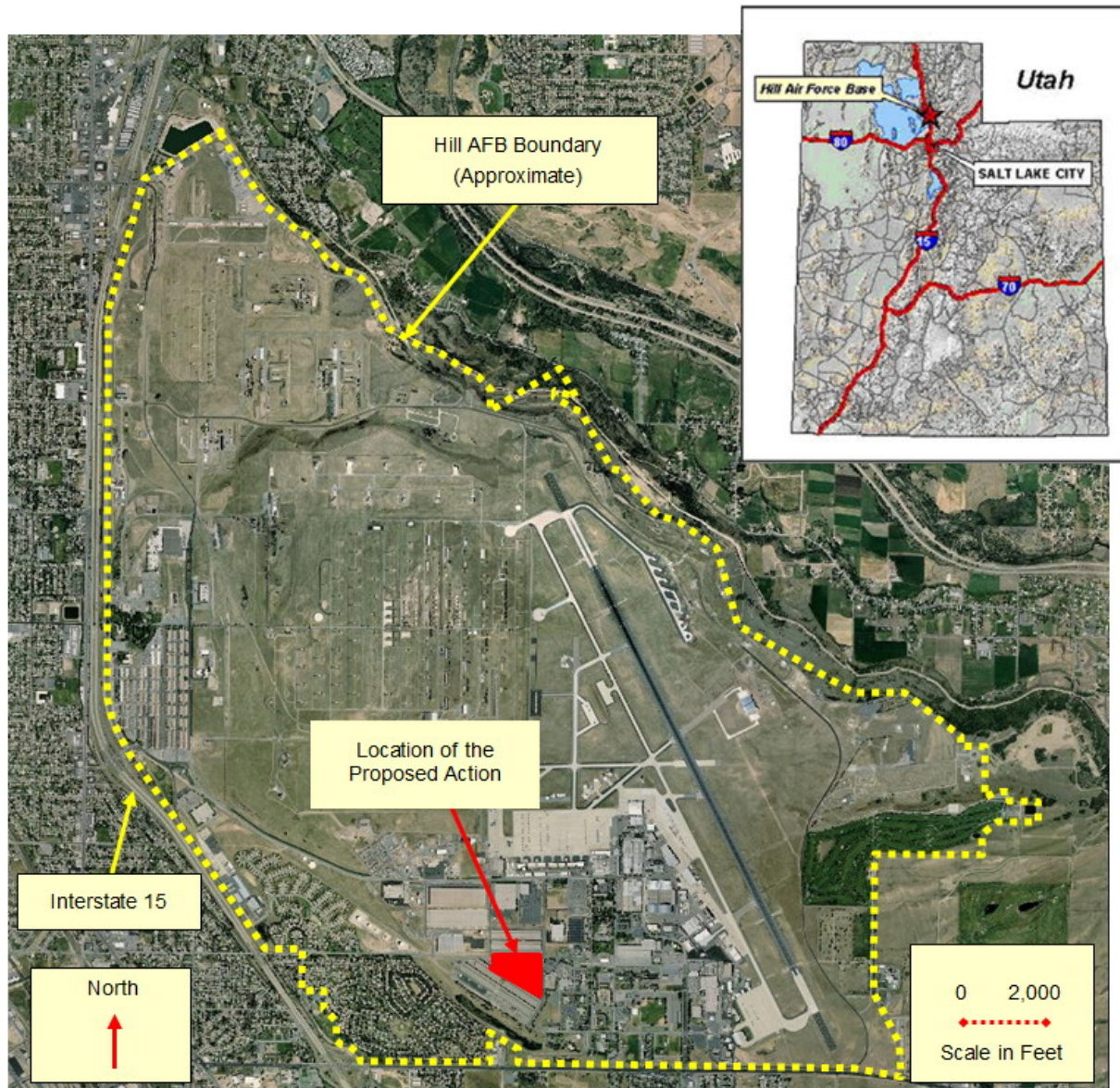


Figure 1: Location of the Proposed Action on Hill AFB

Hill AFB is an Air Logistics Complex (ALC) that maintains aircraft, missiles, and munitions for the United States Air Force (USAF). In support of that mission, Hill AFB provides worldwide engineering and logistics management for the F-22 Raptor, F-35 Joint Strike Fighter, F-16 Fighting Falcon, and A-10 Thunderbolt aircraft. Hill AFB also accomplishes depot repair, modification, and maintenance of the F-16, A-10 Thunderbolt, and C-130 Hercules aircraft. Additional activities include maintaining aircraft landing gear, wheels and brakes for military aircraft, rocket motors, air munitions, guided bombs, photonics equipment, training devices, avionics, instruments, hydraulics, software, and other aerospace-related components.

The Hill AFB Central Training Office (CTO) trains a diverse base population with an ever increasing, highly technical mission related to repairing composite military aircraft. 200 industrial depot repair instructors train 1,000 students on a daily basis.

The United States Navy (USN) reserve operates Navy operational support center (NOSCs), which provide administrative and training functions necessary for reservists to maintain constant readiness to provide peacetime support and permits rapid deployment in the event of partial or full mobilization to support national contingencies. The Utah NOSC serves a weekend drill population of 336 reservists and full time staff.

1.2 Proposed Action

The proposed action is to provide training facilities in support of United States (US) military missions. The proposed training facilities include a consolidated training center for US Air USAF industrial depot repair workers and a NOSC training facility for USN reservists. In addition to constructing new training facilities, Buildings 250, 816, 1221, 1231, and 1279 would be demolished on Hill AFB in support of USAF's physical plant strategy, which calls for reducing net facility footprint by 20 percent between 2006 and 2020(USAF 2009) by demolishing surplus and inefficient facilities.

1.3 Need for the Action

The proposed action is needed due to the following conditions:

- According to USAF military construction (MILCON) project data, the existing industrial depot repair training facilities at Hill AFB consist of widely separated and outdated facilities. Training time is currently wasted as students travel from the aircraft production area to various training sites across the base. The existing facilities do not adequately house the required 200 instructors and 1,000 students, nor do they meet Department of Defense (DOD) antiterrorism/force protection (ATFP) requirements (DOD 2007).
- According to USN MILCON project data, the existing NOSC training facility at Fort Douglas in Salt Lake City, Utah is 5,000 square feet undersized. It does not adequately support the weekend drill population of 336 reservists. It does not meet ATFP requirements or the *Global Shore Infrastructure Plan* (GSIP) recommendation that all NOSCs be located within a DOD installation fence line (Commander Navy Installations Command - CNIC 2011).

1.4 Purposes of the Proposed Action

The purposes of the proposed action are the following:

- Provide a USAF training facility that meets mission requirements.
- Provide a USN training facility that meets mission requirements.

1.5 Relevant EISs, EAs, Laws, Regulations, Plans, and Other Documents

No relevant environmental impact statements (EISs) or environmental assessments (EAs) were identified.

The following federal, state, and local laws and regulations would apply to the proposed action:

- The National Environmental Policy Act (NEPA), Title 42 of the United States Code (USC) Section 4321 *et seq.*
- Council on Environmental Quality NEPA regulations, Title 40 of the Code of Federal Regulations (CFR) Parts 1500-1508.
- USAF-specific NEPA requirements contained in 32 CFR Part 989, Environmental Impact Analysis Process (EIAP).
- Safety guidelines of the Occupational Safety and Health Administration (OSHA).
- Relevant Air Force Occupational Safety and Health (AFOSH) standards.
- Utah's fugitive emissions and fugitive dust rules (Utah Administrative Code [UAC] Section R307-309).
- Utah's State Implementation Plan (SIP [UAC Section R307-110]), which complies with the General Conformity Rule of the Clean Air Act (CAA), Section 176 (c).
- Determining Conformity of Federal Actions to State or Federal Implementation Plans, 40 CFR Part 93.154.
- USAF *Conformity Guide*, 1995.
- USAF Demolition Policy, 2009.
- Utah Asbestos Rules, UAC, Section R307-801.
- The Resource Conservation and Recovery Act (RCRA), 42 USC Chapter 82, and regulations promulgated thereunder, 40 CFR Part 260 *et seq.*
- Federal facility agreement dated April 10, 1991, under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 USC Section 9601 *et seq.*

- Utah hazardous waste management regulations contained in UAC Section R315, and the Hill AFB *Hazardous Waste Management Plan* dated May, 2001, and subsequent versions.
- The Clean Water Act (CWA), 33 USC Section 1251 *et seq.*, and Utah statutes and regulations promulgated thereunder.
- The Energy Independence and Security Act (EISA) of 2007, Public Law No. 110-140, Sec. 438, Stormwater Runoff Requirements for Federal Development Projects.
- The Hill AFB *Stormwater Management Program - Municipal Stormwater Permit*, dated August, 2011, and subsequent versions.
- Migratory Bird Treaty Act (MBTA), 16 USC Sections 703-712 *et seq.*
- Bald and Golden Eagle Protection Act, 16 USC Sections 668-668c *et seq.*
- The National Historic Preservation Act (NHPA) of 1966, as amended 16 USC Section 470 *et seq.*

Four Hill AFB resource management plans apply to the proposed action:

- The Hill AFB *Integrated Natural Resources Management Plan*, dated August, 2007, and subsequent versions.
- The Hill AFB *Integrated Cultural Resources Management Plan*, dated January, 2007, and subsequent versions.
- *Spill Prevention Control and Countermeasures (SPCC) Plan for Hill Air Force Base* (Hill 2012a).
- *Hill AFB General Plan* (Hill 2012c).

During the scoping process, no other documents were identified as being relevant to the proposed action.

1.6 Decisions That Must Be Made

Hill AFB must decide which of the following alternatives to implement:

- Not construct new training facilities (no action), or
- Construct new training facilities (proposed action).
- If new training facilities are constructed, then a location must be selected (see Section 2.2).

1.7 Scope of this Environmental Analysis

The scope of the environmental analysis is to consider issues related to the proposed action and the reasonable alternatives identified within this document.

1.7.1 History of the Planning and Scoping Process

Scoping discussions were conducted by the 75th Civil Engineering Group, Environmental Quality Branch (75 CEG/CENE). Participants in the EIAP Interdisciplinary Team (IDT) included proponents of the proposed action, the EIAP manager, resource managers, and the authors of this document. A scoping meeting was conducted at Building 5, Hill AFB, on February 26, 2013. During the scoping process, the EIAP/IDT considered and addressed the following issues:

- air quality;
- solid and hazardous wastes (including liquid waste streams);
- biological resources;
- geology and surface soils;
- water quality;
- cultural resources;
- occupational safety and health;
- air installation compatible use zone (AICUZ); and
- socioeconomic resources.

1.7.2 Issues Studied in Detail

The issues that have been identified for detailed consideration and are therefore presented in Sections 3 and 4 are:

Air Quality (attainment status, emissions, Utah's SIP)

Buildings 250, 816, 1221, 1231, and 1279, which may contain asbestos, would be demolished as part of the proposed action. For the purposes of this document, if the word construction is used by itself, any potential demolition activities are included.

Air emissions would be produced by construction equipment. Operating the proposed action would create air emissions. Air quality effects are discussed in Section 4 of this document.

Solid and Hazardous Wastes (materials to be used, stored, recycled, or disposed, including liquid waste streams; existing asbestos, lead-based paint, mercury, and polychlorinated biphenyls [PCBs])

During construction activities, solid wastes would be generated, and other hazardous wastes might be generated that would require proper treatment and/or disposal. Additional hazardous wastes could be generated if a spill of fuel, lubricants, or construction-related chemicals were to occur. Operating the proposed action would create solid and hazardous wastes.

Effects related to solid and hazardous wastes are discussed in Section 4 of this document.

Water Quality (surface water, groundwater, water quantity, wellhead protection zones)

Based on information provided by Hill AFB, the land area to be disturbed would be approximately eight acres in size. The proposed action would be subject to stormwater permit and compliance requirements both during the construction period and during operations.

Depth to groundwater is approximately 35 feet below the ground surface (bgs) in the vicinity of the proposed action (CH2M 2009). Groundwater contamination exists in the vicinity of the proposed action (Hill 2012b); however, the proposed action would not require excavations deeper than approximately ten feet bgs (for footings, foundations, and on-site utilities). The proposed action is located within a wellhead protection zone. Effects related to water quality are discussed in Section 4 of this document.

Liquid waste streams created during construction and operations are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

1.7.3 Issues Eliminated From Further Study

The issues that were not carried forward for detailed consideration in Sections 3 and 4 are:

Biological Resources (flora and fauna including threatened, endangered, sensitive species; wetlands; floodplains)

Approximately eight acres of previously disturbed land would be re-developed by the proposed action. The site is essentially devoid of flora and fauna.

The scoping discussions did not identify any issues related to wetlands or floodplains.

Geology and Surface Soils (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination)

The scoping discussions did not identify any issues related to seismicity, topography, minerals, or geothermal resources.

Excavations would be necessary to install: footings; foundations; pavements; and buried utilities consisting of water, electricity, telephone/data, and storm drains. Discussions related to

preventing soil erosion (stormwater pollution prevention) are addressed under water quality effects (Section 4 of this document).

Contamination of shallow soil is known to exist approximately 1,000 feet from the proposed action (Hill 2012b). Potential discovery of suspicious soils during excavation is addressed under solid and hazardous wastes (Section 4 of this document).

Cultural Resources (archaeological, architectural, traditional cultural properties)

Cultural resources are any place, site, building, structure object, or collection of these that was built or used by people. Some cultural resources, such as traditional cultural properties and sacred sites, may be a place without any visible evidence of human use or modification.

Buildings 250, 1221, and 1231 were constructed in the 1940s and are considered ineligible for listing in the National Register of Historic Places (NRHP) due to lack of architectural integrity. The Utah State Historic Preservation Office (SHPO) concurred with these determinations on April 9, 2008.

Building 816 was constructed in 1979 and is yet not historic nor has it been determined eligible for its role during the Cold War.

Building 1279 was constructed in 1942 and is considered eligible for listing on the NRHP due to its association with World War II. However, it has been previously mitigated through a memorandum of agreement between the USAF, The Utah SHPO, and Sunset Ridge Development Partners, signed in 2008.

Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for historic properties is extremely low. However, if any such properties are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB cultural resources program manager will be notified, and unanticipated discovery of archaeological deposits procedures will be implemented with direction from the Hill AFB cultural resources program manager in accordance with Standard Operating Procedure 5 in the Hill AFB *Integrated Cultural Resources Management Plan* (Hill 2007a).

The proposed action and associated demolitions have been determined to have no adverse effect to historic properties. The Utah SHPO concurred with this determination on April 11, 2013 (Appendix A).

Hill AFB has determined formal consultation with American Indian Tribes is not warranted given the absence of resources that may be reasonably construed as being of interest to them.

Occupational Safety and Health (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft)

Throughout the construction phase of the project, Hill AFB contractors would follow OSHA safety guidelines as presented in the CFR. Hazardous materials that could be used during construction are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

Related to Hill AFB military personnel and civilian employees, the Bio-environmental Engineering Flight (75 AMDS/SGPB) is responsible for implementing AFOSH standards. The AFOSH program addresses (partial list): hazard abatement, hazard communication, training, personal protective equipment and other controls to ensure that occupational exposures to hazardous agents do not adversely affect health and safety, and acquisition of new systems.

The scoping discussions did not identify any issues related to occupational safety and health that would not be routinely addressed by OSHA rules and/or the Bio-engineering Flight.

AICUZ (noise, accident potential, airfield encroachment)

The scoping discussions did not identify any issues related to noise, aircraft accident potential, or airfield encroachment.

Socioeconomic Resources (local fiscal effects including employment, population projections, and schools)

Opportunities would exist for local construction workers if the proposed action is constructed. Operating the proposed action would not be expected to create additional jobs at Hill AFB. The scoping discussions did not identify any issues related to population projections or schools.

1.8 Applicable Permits, Licenses, and Other Coordination Requirements

Obtaining, modifying, and/or complying with the following permits would be required to implement the proposed action.

- The Hill AFB Title V Operating Permit (Permit Number: 1100007001, and subsequent versions). See Section 4.2.1 for additional details.
- Utah's Stormwater General Permit for Construction Activities permit number UTR300000, dated July 1, 2008, and subsequent versions. See Section 4.2.3 for additional details.
- Utah's General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) permit number UTR090000, dated August 1, 2010, and subsequent versions. See Section 4.2.3 for additional details.
- Utah's Multi Sector General Permit for Industrial Facilities permit number UTR000444, dated January, 2008, and subsequent versions. See Section 4.2.3 for additional details.
- The Hill AFB *Stormwater Management Program - Municipal Stormwater Permit*, dated April, 2011, and subsequent versions. See Section 4.2.3 for additional details.

The proponents would coordinate with the Hill AFB hazardous materials program manager (75 CEG/CENE) to discuss hazardous materials brought on base to construct the proposed action. See Section 4.2.2 for additional details.

2.0 ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

This section describes each of the alternatives considered. It documents the process used to develop the alternatives and lists the selection criteria. It presents a comparison matrix of the predicted achievement of project objectives for each of the various alternatives. This section also identifies the Air Force's preferred alternative.

2.2 Description of Alternatives

2.2.1 Alternative A: No Action

Under the no action alternative, new training facilities would not be constructed, and adequate facilities would not be provided. The existing facilities would operate as they are currently configured. USAF training schedules would continue to be impacted due to inadequate facilities and lengthy travel time between various facilities. Instructors would continue to struggle with inadequate facilities and outdated training equipment. Ultimately, Hill AFB would not have an adequately trained workforce to perform its mission. USN reservists would continue to drill in an inefficiently configured building that lacks the required space. The USAF training facilities would not comply with ATFP requirements. The NOSC training facility would not comply with ATFP requirements or GSIP recommendations. Neither the needs in Section 1.3 nor the purposes in Section 1.4 would be satisfied.

2.2.2 Alternative B: Proposed Action - Construct Training Facilities

The boundary of the proposed action is shown in Figure 2.



Figure 2: Boundary of Proposed Facilities and Parking Areas

The proposed USAF consolidated training center would provide an adequately sized facility equipped with the latest classroom media presentation equipment to train industrial depot repair workers who perform highly technical activities.

MILCON project data indicate this component of the proposed action would consist of:

- Three 23,000 square foot each, two-story buildings (constructed in phases) with structural steel frames, reinforced concrete foundations, concrete floor slabs, mechanical and electrical systems, water and fire protection systems, and communications networks.
- Associated parking lots and connections to adjacent buried utilities.

The proposed NOSC training facility would provide spaces for administrative support, medical services, unit classrooms and offices, and a drill hall.

MILCON project data indicate this component of the proposed action would consist of:

- A 37,000 square foot single-story building with a structural steel frame, reinforced concrete foundations, concrete floor slabs, mechanical and electrical systems, water and fire protection systems, and communications networks.
- Associated parking lots and connections to adjacent buried utilities.

In addition to constructing new training facilities, Buildings 250, 816, 1221, 1231, and 1279 would be demolished on Hill AFB. Demolishing five outdated buildings would support USAF's physical plant strategy, which calls for reducing net facility footprint by 20 percent between 2006 and 2020 (USAF 2009) by demolishing surplus and inefficient facilities (Figure 3).



Figure 3: Location of Proposed Demolitions on Hill AFB

2.2.3 Alternative C: Improve Existing Facilities

This alternative would expand the existing training facilities in the same locations where they currently exist. Both lateral and vertical expansion configurations were considered.

2.2.4 Alternative D: Construct Training Facilities Off Hill AFB

USAF considered leasing a facility located in Layton or one of the other cities that surround Hill AFB. USN considered other locations for a new NOSC training facility. Those locations were Dugway Proving Ground, Tooele Army Depot, Camp Williams, Deseret Chemical Depot, and the Utah Air National Guard Base.

2.3 Process Used to Develop the Alternatives

As discussed in Sections 1.2, 1.3, and 1.4, Hill AFB proposes to provide new training facilities. The proposed facilities would address the needs discussed in Section 1.3 and the purposes stated in Section 1.4.

Hill AFB planners, engineers, and Facility Working Group explored other alternatives. The feasibility of improving existing facilities and developing other locations was compared to the selection criteria. The option to take no action was also considered.

2.3.1 Alternative Selection Criteria

The selection criteria presented below were created in compliance with guidance published by the Air Force Center for Environmental Excellence (AFCEE 2005). AFCEE stated that selection criteria are used to develop alternatives and to evaluate whether or not a particular alternative is reasonable. The two types of criteria discussed are:

Functional Criteria - Functional criteria describe the capabilities or characteristics that must be present in the proposed action and all action alternatives to meet the project objectives. For example, a functional criterion for a project to build an engine repair facility might be that it is located no further than 1.5 miles from the hangar where the aircraft engines are removed.

Environmental Criteria - These criteria focus on regulatory concerns. The proposed action and all other action alternatives must meet federal, state, and local environmental regulations.

If an alternative is developed that does not meet the minimum functional and environmental criteria, it is not considered a reasonable alternative.

Based on the above AFCEE guidance and project-specific MILCON documents, the following selection criteria were used to develop the proposed action and alternatives. The USAF and USN training facilities should:

- Be adequately sized.

The USAF consolidated training center requires 69,000 square feet of building space. The NOSC training facility requires 37,000 square feet of building space. Adjacent parking stalls should be provided to the extent possible, but other nearby existing parking lots could be used for overflow parking. This functional criterion responds to the purpose of meeting mission requirements.

- Comply with ATFP requirements.

Examples of ATFP requirements are security protection and minimum standoff distances (proper control of access and entry). This functional criterion responds to the need to meet ATFP requirements.

- Comply with GSIP recommendations.

The Navy's GSIP recommends NOSC be located on installations that provide food, lodging, medical and dental services, chapels and chaplains, and other community services. This functional criterion responds to the need to meet GSIP recommendations.

- Be located on one site (USAF) and near the population being served (USN).

Hill AFB is the location where the 200 industrial depot repair instructors and 1,000 students work on a daily basis. Using one site for the USAF training facility would increase training time by approximately 80,000 hours per year as instructors and students would no longer be required to travel from the aircraft production area to various training sites across the base. Currently, 40 percent of the NOSC full-time staff members live on Hill AFB. This functional criterion responds to the purpose of meeting mission requirements, because it satisfies the need to greatly increasing training time (USAF), and because it responds to MILCON project data by being located near the population being served (USN).

- Comply with the *Hill AFB General Plan*.

The *Hill AFB General Plan* (Hill 2012c) dictates development zones applicable to maintaining facilities and building new structures on the base. The proposed location lies within the Hill AFB warehousing and office area, which contains structures that store military assets and house other non-industrial, non-residential uses such as offices and training facilities. Segregating these land uses into a warehousing and office zone prevents conflicts with industrial uses, explosive clear zones, and residences. It provides a buffer between industrial and residential land uses, and it promotes the safety of military personnel and their children, civilian employees, contractors, and base visitors. This functional criterion ensures all action alternatives would comply with the *Hill AFB General Plan*.

- Comply with federal, state, and local environmental regulations.

This is a standard environmental criterion for all Hill AFB actions.

2.3.2 Alternatives Eliminated From Detailed Consideration

In addition to the proposed action, two additional alternatives were identified but were eliminated due to not meeting the selection criteria.

Alternative C: Improve Existing Facilities

USAF and USN planners considered expanding the existing training facilities in the same locations where they currently exist. In neither case could the minimum ATRP requirements for security and standoff distances be met, even if expanding vertically, because the existing standoff distances do not comply with ATRP requirements. Additionally, the NOSC training facility would not comply with GSIP recommendations.

Alternative D: Construct Training Facilities Off Hill AFB

USAF planners considered leasing a facility located in Layton or one of the other several cities that surround Hill AFB. The minimum ATRP requirements for security and standoff distances could not be met.

USN considered constructing a new NOSC training facility at Dugway Proving Ground, Tooele Army Depot, Camp Williams, Deseret Chemical Depot, and the Utah Air National Guard Base. None of these locations complied with the GSIP recommendations and the criterion to be conveniently located relative to the population being served.

Dugway Proving Ground was rejected because USN concluded the facility would create high risk to mission requirements under the criteria of available land, medical and dental services, community services, and location. Tooele Army Depot was rejected because USN concluded the facility would create high risk to mission requirements under the criterion of location and would create moderate risk to mission requirements under the criterion of community services. Camp Williams was rejected because USN concluded the facility would create high risk to mission requirements under the criteria medical and dental services and location. Deseret Chemical Depot was rejected because USN concluded the facility would create high risk to mission requirements under the criteria of available land, medical and dental services, community services, and location. The Utah Air National Guard Base was rejected because USN concluded the facility would create high risk to mission requirements under the criteria of available land area, medical and dental services, and community services.

2.4 Summary Comparison of the Alternatives and Predicted Achievement of the Project Objectives

2.4.1 Summary Comparison of Project Alternatives

The no action alternative (Alternative A) would be to continue current operations using the existing facilities. Considering implementation of Alternatives A, B, C, and D, only Alternative B (the proposed action) would fully satisfy the purposes as stated in Section 1.4 and the selection criteria from Section 2.3.1.

2.4.2 Predicted Achievement of Project Objectives

	Alternatives from Section 2.2			
	A No Action	B Proposed Action	C Upgrade Existing Facilities	D Construct Off Hill AFB
Purposes of the Proposed Action from Section 1.4				
Provide a USAF training facility that meet mission requirements	No	Yes	No	No
Provide a USN training facility that meet mission requirements	No	Yes	No	No
Additional Selection Criteria from Section 2.3.1				
Be adequately sized	No	Yes	No	No
Comply with ATRP requirements	No	Yes	No	No
Comply with GSIP Recommendations	No	Yes	No	No
Be located on one site (USAF) and near the population being served (USN)	No	Yes	No	No
Comply with the <i>Hill AFB General Plan</i>	No	Yes	No	No
Comply with federal, state, and local environmental regulations	Yes	Yes	Yes	Yes

Table 1: Predicted Achievement of Project Objectives

2.5 Identification of the Preferred Alternative

Hill AFB prefers Alternative B (the proposed action).

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

Section 3 of this document discusses the existing conditions of the potentially affected environment, establishing a resource baseline against which the effects of the various alternatives can be evaluated. It presents relevant facilities and operations, environmental issues, pre-existing environmental factors, and existing cumulative effects due to human activities in the vicinity of the proposed action or the alternative locations.

Issues discussed during scoping meetings, but eliminated from detailed consideration (see Section 1.7.3) include:

- biological resources (flora and fauna including threatened, endangered, sensitive species; wetlands; floodplains);
- geology and surface soils (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination);
- cultural resources (archaeological, architectural, traditional cultural properties);
- occupational safety and health (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft);
- AICUZ (noise, accident potential, airfield encroachment); and
- socioeconomic resources (local fiscal effects including employment, population projections, and schools).

3.2 Description of Relevant Facilities and Operations

As stated above, the existing facilities do not comply with the purpose to provide training facilities that meet mission requirements, nor do they comply with the functional selection criteria. No other relevant facilities or operations were identified.

3.3 Description of Relevant Affected Issues

3.3.1 Air Quality

Compared to federal clean air standards, Utah's Division of Air Quality (DAQ) reports five non-attainment and/or maintenance area designations (Figures 4-8 [DAQ 2013]) in the vicinity of Hill AFB. Non-attainment areas fail to meet national ambient air quality standards (NAAQS) for one or more of the criteria pollutants: oxides of nitrogen (NO_x), sulfur dioxide (SO₂), ozone (O₃), particulates less than 10 microns in diameter (PM-10), particulates less than 2.5 microns in diameter (PM-2.5), carbon monoxide (CO), and lead. Maintenance areas were once designated as non-attainment, but are now consistently meeting the NAAQS.



Figure 4: State of Utah Areas of Non-Attainment for PM-10

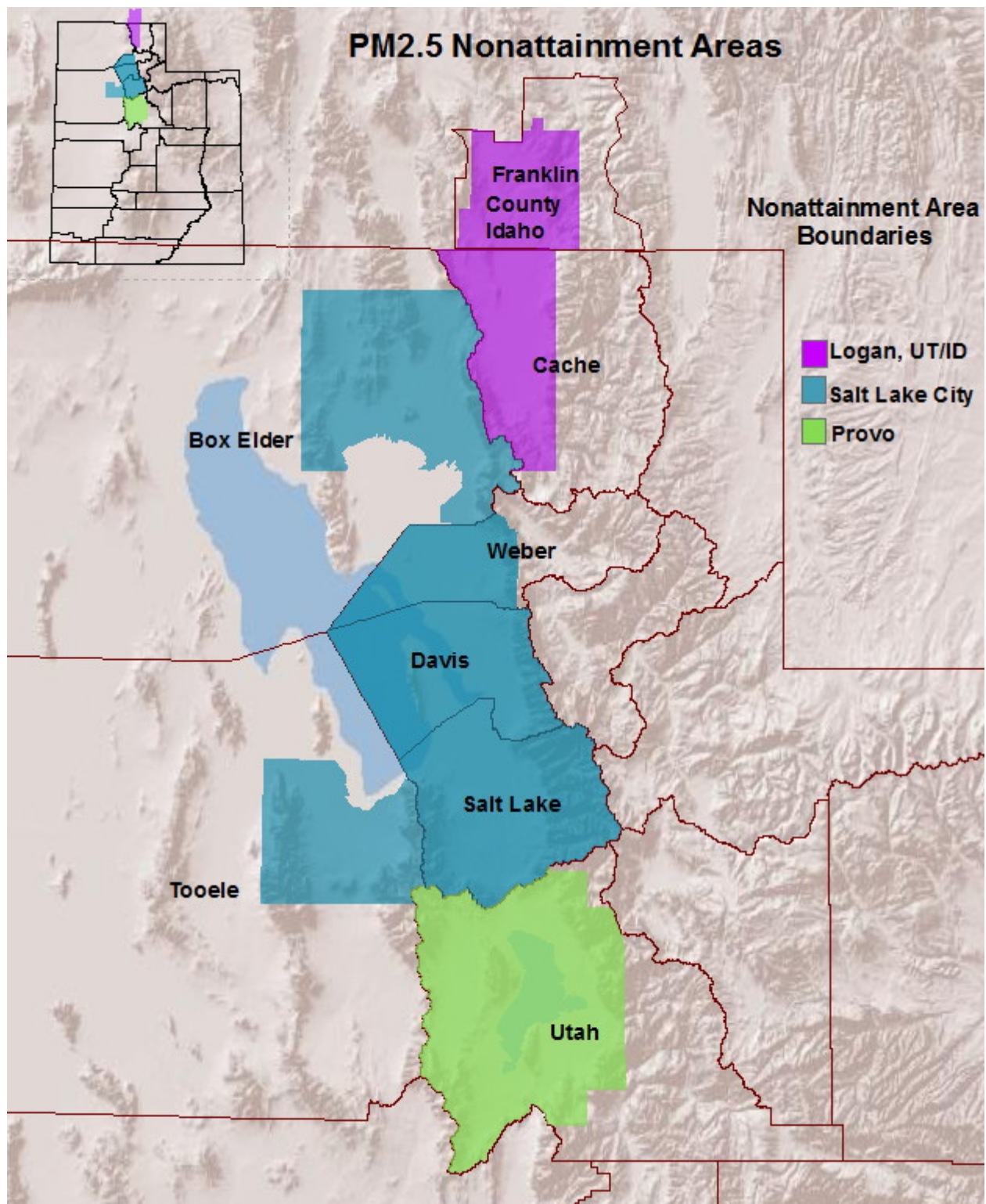


Figure 5: State of Utah Areas of Non-Attainment for PM-2.5

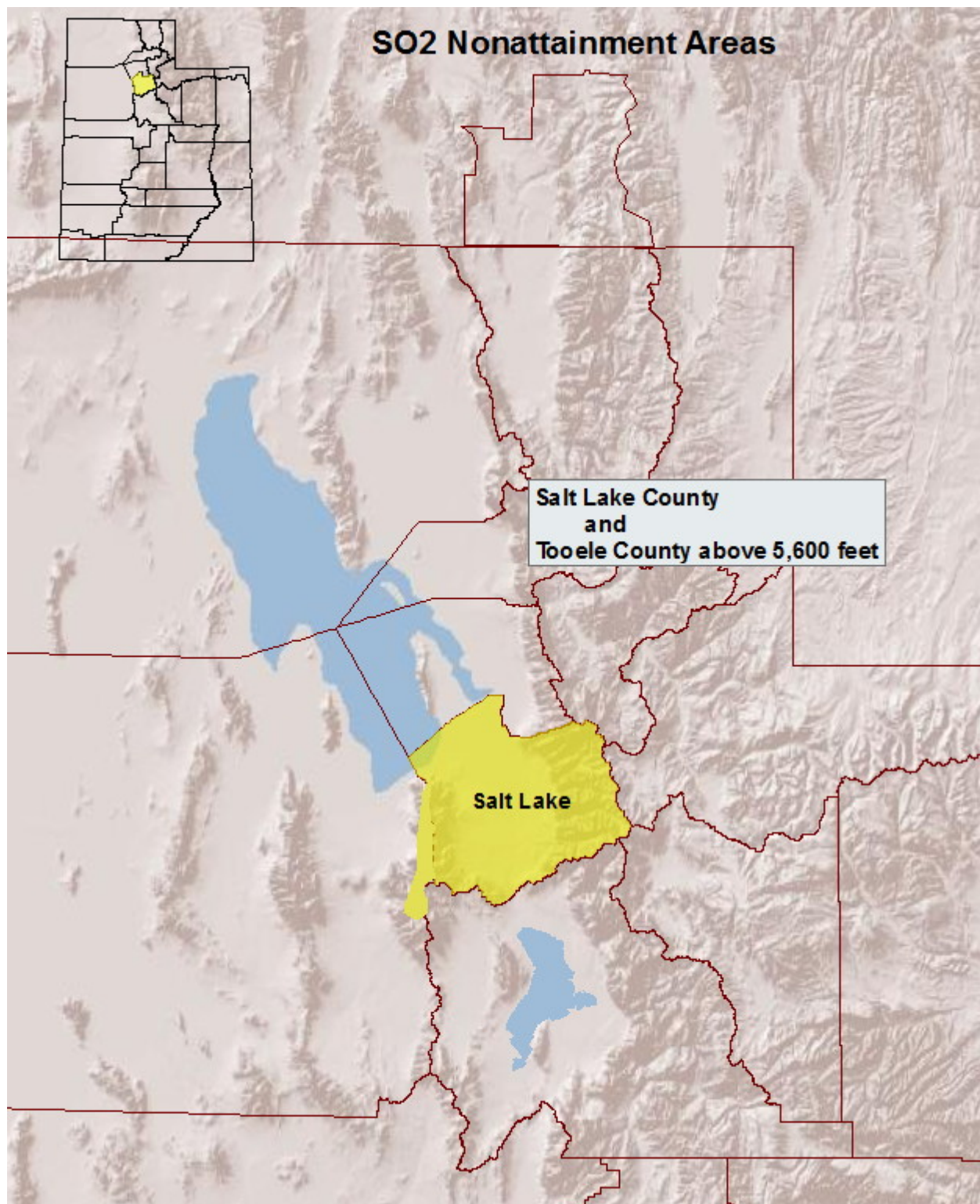


Figure 6: State of Utah Areas of Non-Attainment for SO₂

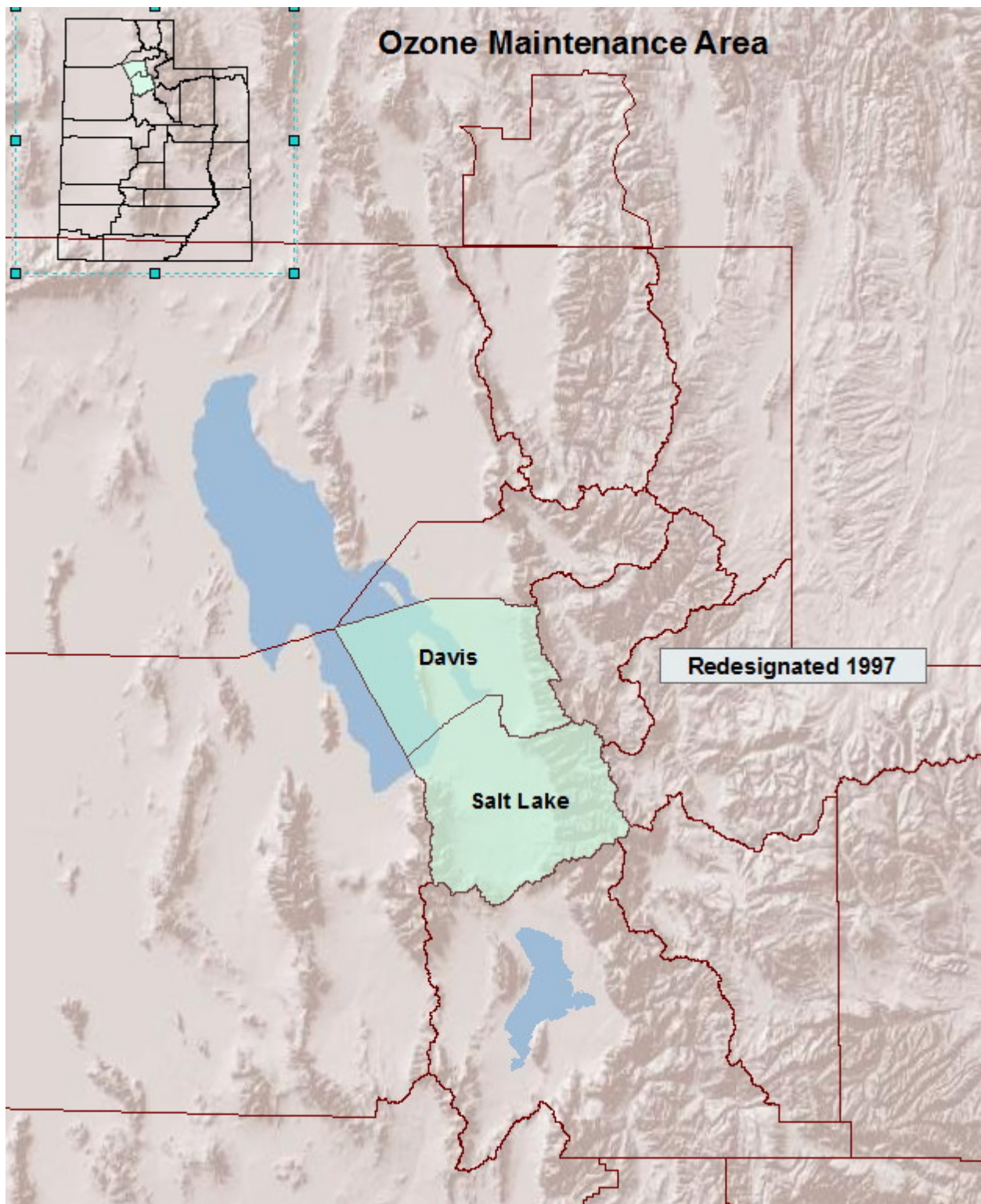


Figure 7: State of Utah Maintenance Areas for Ozone

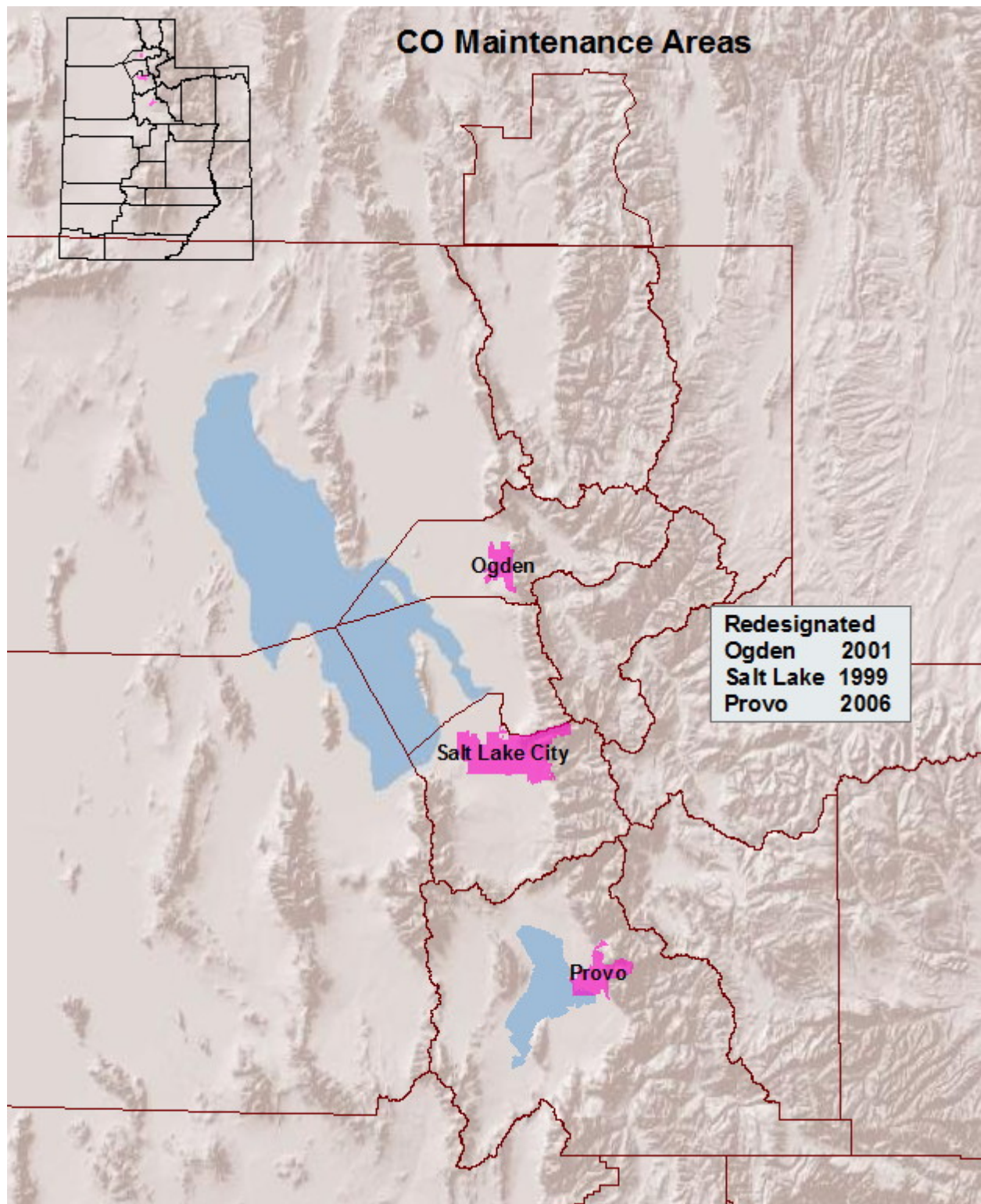


Figure 8: State of Utah Maintenance Areas for CO

The current air quality trend at Hill AFB is one of controlling emissions as Hill AFB managers implement programs to eliminate ozone-depleting substances, limit use of volatile organic compounds (VOCs), switch to lower vapor pressure solvents and aircraft fuel, convert internal combustion engines from gasoline and diesel to natural gas, and improve the capture of particulates during painting and abrasive blasting operations (in compliance with the base's Title V air quality permit).

Table 2 presents the most recently published annual emission estimates for criteria pollutants and VOCs for Hill AFB (Hill 2012d) and for Davis and Weber Counties (DAQ 2013).

Location	Emissions By Pollutant (tons/year)					
	CO	NO _x	PM-10	PM-2.5	SO _x	VOC
Hill AFB	131	190	20	12	1	199
Davis County	36,172	8,752	1,176	699	463	14,504
Weber County	30,794	6,197	1,122	536	114	13,466

Table 2: Baseline Air Pollutants

There are no process-related air emissions for the existing training activities. Air emissions from the existing facilities are created due to space heating during the winter months. For the discussion of existing conditions, only the buildings proposed for demolition are relevant (emissions that would be eliminated). Continuing to heat existing buildings that would not be demolished is not considered part of the proposed action.

Four of the buildings proposed for demolition are connected to the Hill AFB central steam heating system. The calculated air emissions for those buildings (based on data in CH2M 2013) are shown in Table 3.

Heated Area	VOC	CO	NO _x	PM-10	PM-2.5	HAP	SO _x
3,700,000 ft ²	1.0	15.3	18.2	1.4	1.4	2.1	0.1
Buildings 250, 1221, 1231, and 1279 (48,000 ft ²)	0.01	0.20	0.24	0.02	0.02	0.03	0.00

Notes:

The central steam plant provides heat for 3,700,000 square feet (ft²) of Hill AFB facilities.

Hazardous air pollutant (HAP)

Buildings 250, 1221, 1231, and 1279 account for 48,000 ft² of the heated area.

Based on summer versus winter month emissions, heating related emissions were prorated as 86 percent of total emissions from the central steam plant.

Table 3: Existing Air Emissions Due to Steam Heating (tons/year)

One of the buildings proposed for demolition is heated by a natural gas furnace. The calculated air emissions are shown in Table 4.

Data Assumptions						
Equipment Type	Natural Gas Emission Factor (pounds/MMSCF)					
	VOC	CO	NOx	PM10	HAPs	SOx
Natural Gas Furnace	5.5	40.0	94.0	7.6	0.01	0.6
Conversion Factors						
	Calculate Annual Fuel Consumption					
Square Feet	529	529	529	529	529	529
BTU per hour per square foot	30	30	30	30	30	30
Heating hours per year	5,000	5,000	5,000	5,000	5,000	5,000
Million BTU per year	79	79	79	79	79	79
MMSCF per year	0.1	0.1	0.1	0.1	0.1	0.1
Heat Existing Building 816						
Equipment Type	Natural Gas Emissions (pounds)					
	VOC	CO	NOx	PM10	HAPs	SOx
Natural Gas Furnace	0	3	7	1	0.0	0
TOTAL ESTIMATED EMISSIONS (pounds/year)	0	3	7	1	0.0	0
TOTAL ESTIMATED EMISSIONS (tons/year)	0.00	0.00	0.00	0.00	0.00	0.00
<i>Notes:</i>						
MMSCF = Million Standard Cubic Feet						
BTU = British Thermal Unit						
1 cubic foot natural gas = 1,028 BTU						
Source: http://www.eia.doe.gov/kids/energyfacts/science/energy_calculator.html#natgascalc						
Office Space (as opposed to warehouse space): 15-45 BTU per hour per square foot						
There are approximately 5,000 heating hours in an average year						
Source: Dale R. Scott, P.E., SAIN Engineering Associates, Inc., 75CES/CEEE, Hill AFB, UT						
Assume 30 BTU per hour per square foot						
Emission factors: EPA values for residential furnaces						
For natural gas, SOx assumed equal to SO2						

Table 4: Existing Air Emissions Due to Furnace (tons/year)

3.3.2 Solid and Hazardous Wastes

In general, hazardous wastes include substances that, because of their concentration, physical, chemical, or other characteristics, may present substantial danger to public health or welfare or to the environment when released into the environment or otherwise improperly managed. Potentially hazardous and hazardous wastes generated at Hill AFB are managed as specified in the *Hill AFB Hazardous Waste Management Plan* with oversight by personnel from the Hill AFB Environmental Quality Branch and the Defense Reutilization and Marketing Office (DRMO). Hazardous wastes at Hill AFB are properly stored during characterization, and then manifested and transported off site for treatment and/or disposal.

Non-regulated wastes created by the existing training activities are comprised of office and break room trash. No other waste streams were identified for the existing training activities.

3.3.3 Water Quality

In areas of Hill AFB that are not heavily developed, runoff is allowed to infiltrate into the ground through overland flow or surface ditches, discharging to large unoccupied areas. In developed areas, stormwater is typically conveyed to 14 retention or detention ponds within Hill AFB boundaries.

No surface water bodies are present within the area occupied by the proposed action. Based on a review of the *Hill AFB Stormwater Management Program - Municipal Stormwater Permit* (Stantec 2011), storm drains convey surface runoff from this area of Hill AFB to Pond 3, a wet detention pond that discharges to Kay's Creek. Best management practices for Pond 3 are surface contaminant collection booms, aerators to prevent the water from becoming stagnant, and a trash rack at the outlet to collect litter and debris (Stantec 2011).

Depth to groundwater is approximately 35 feet bgs in the vicinity of the proposed action (CH2M 2009). A Hill AFB fact sheet shows groundwater contamination exists in the vicinity of the proposed action (Hill 2012b). Trichloroethene (TCE) and methyl tertiary-butyl ether (MTBE) have migrated approximately 800 feet southwest of the source area to the eastern boundary of the proposed action. Contaminants have been detected in multiple sand units at depths ranging from 30 to 90 feet bgs (CH2M 2008).

The proposed action is located within a drinking water source protection (DWSP) area. It is partly within wellhead protection Zone 2 and partly within wellhead protection Zone 3 for Hill AFB Well 5 (Hill 2008). Zone 2 is the area within 250 days' groundwater time of travel to the wellhead or margin of the collection area. Zone 3 is the area within three years' groundwater time of travel to the wellhead or margin of the collection area.

3.4 Description of Relevant Pre-Existing Environmental Factors

The Wasatch Front Regional Council (WFRC 2003) assessed earthquake hazards for Davis County, Utah, including the portion of Hill AFB that includes the alternatives discussed in this document. The Davis County earthquake hazard map shows this area of Hill AFB to be outside of known fault zones. The Davis County liquefaction potential map shows this area of Hill AFB to be in the zone labeled as very low risk. The Davis County landslide hazard map shows this area of Hill AFB to be outside of known landslide risk zones.

During scoping discussions and subsequent analysis, no other pre-existing environmental factors (e.g., hurricanes, tornados, floods, droughts) were identified for the proposed action.

3.5 Description of Areas Related to Cumulative Effects

For air quality, the area related to cumulative effects would include Hill AFB, Davis County, and Weber County.

For solid and hazardous wastes, the area related to cumulative effects would include Hill AFB.

For water quality, the area related to cumulative effects would include Hill AFB and waters downstream from the Hill AFB stormwater detention ponds.

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

This section discusses effects to the resources that were identified for detailed analysis in Section 1.7.2, and for which existing conditions were presented in Section 3.3. For each of these resources, the following analyses are presented:

- direct, indirect, and cumulative effects of no action (Alternative A); and
- direct, indirect, and cumulative effects of the proposed action (Alternative B).

4.2 Predicted Effects to Relevant Affected Resources

4.2.1 Predicted Effects to Air Quality

4.2.1.1 Alternative A: No Action

Existing air emissions as explained in Section 3.3.1 would continue. The no action alternative would have no other direct effects, no indirect effects, and no cumulative effects.

4.2.1.2 Alternative B: Proposed Action - Construct Training Facilities

Direct Effects Due to Construction

Fugitive Dust: Fugitive emissions from construction activities would be controlled according to UAC Section R307-205, *Emission Standards: Fugitive Emissions and Fugitive Dust* and the Hill AFB *Fugitive Dust Plan*. Good housekeeping practices would be used to maintain construction opacity at less than 20 percent. Haul roads would be kept wet. Any soil that is deposited on nearby paved roads by construction vehicles would be removed from the roads and either returned to the site or placed in an appropriate on-base disposal facility.

Heavy Equipment: The internal combustion engines of heavy equipment would generate air emissions. Assumptions and estimated emissions from heavy equipment constructing each phase of the USAF consolidated training center are listed in Table 5. The phases would be constructed at various times, most likely only one phase in any given year. Assumptions and estimated emissions from heavy equipment constructing the NOSC training facility are listed in Table 6. Assumptions and estimated emissions from heavy equipment demolishing Buildings 250, 816, 1221, 1231, and 1279 are listed in Table 7.

Additional air emissions would be generated from laying a three-inch thick course of hot-mix asphalt. Based on six acres of paved area and emission factors from the United States Environmental Protection Agency (EPA 2004), less than seven pounds of VOCs would be released.

Data Assumptions							
Equipment Type	Emission Factor (lb/hr)						
	CO	NOx	PM-10	PM-2.5	SO ₂	VOC	
Diesel Water Truck	1.37	3.63	0.27	0.26	0.49	0.29	
Diesel Road Compactors	0.33	1.08	0.07	0.07	0.16	0.08	
Diesel Paver	0.33	1.08	0.07	0.07	0.16	0.08	
Diesel Dump Truck	1.37	3.63	0.27	0.26	0.49	0.29	
Diesel Excavator	0.86	3.04	0.21	0.21	0.49	0.22	
Diesel Trenchers	0.94	2.24	0.18	0.17	0.29	0.20	
Diesel Bore/Drill Rigs	1.51	4.73	0.33	0.32	0.48	0.40	
Diesel Cement & Mortar Mixers	1.53	4.81	0.32	0.31	0.48	0.40	
Diesel Cranes	0.50	2.21	0.13	0.13	0.28	0.17	
Diesel Graders	0.90	3.13	0.22	0.21	0.49	0.23	
Diesel Tractors/Loaders/Backhoes	1.81	1.59	0.30	0.29	0.21	0.41	
Diesel Bull Dozers	0.91	3.15	0.22	0.21	0.49	0.24	
Diesel Front End Loaders	1.03	3.31	0.23	0.22	0.49	0.25	
Diesel Fork Lifts	1.71	1.89	0.31	0.30	0.21	0.44	
Diesel Generator Set	0.33	0.53	0.06	0.06	0.07	0.11	
Construct Consolidated Training Center (Per Phase Basis)							
EQUIPMENT TYPE	HOURS OF USE	Emissions (lb)					
		CO	NOx	PM-10	PM-2.5	SO ₂	VOC
Diesel Water Truck	14	19.2	50.8	3.8	3.7	6.9	4.1
Diesel Road Compactors	14	4.6	15.1	1.0	1.0	2.3	1.1
Diesel Paver	32	10.4	34.6	2.4	2.3	5.2	2.6
Diesel Dump Truck	270	369.6	980.4	73.2	71.4	132.1	78.6
Diesel Excavator	145	124.7	441.1	30.7	29.7	71.0	32.6
Diesel Trenchers	95	89.4	212.9	16.9	16.1	27.1	18.7
Diesel Bore/Drill Rigs	12	18.2	56.7	4.0	3.9	5.8	4.8
Diesel Cement & Mortar Mixers	20	30.7	96.3	6.3	6.2	9.7	8.1
Diesel Cranes	8	4.0	17.7	1.0	1.0	2.3	1.4
Diesel Graders	48	43.2	150.2	10.5	10.2	23.5	11.1
Diesel Tractors/Loaders/Backhoes	238	430.8	378.8	71.9	69.8	49.8	97.1
Diesel Bull Dozers	14	12.8	44.1	3.1	3.0	6.9	3.3
Diesel Front End Loaders	18	18.5	59.5	4.2	4.0	8.8	4.5
Diesel Fork Lifts	6	10.3	11.3	1.8	1.8	1.3	2.6
Diesel Generator Set	12	4.0	6.3	0.8	0.8	0.9	1.3
TOTAL ESTIMATED EMISSIONS (lb)		1190.2	2555.9	231.6	225.0	353.4	271.8
TOTAL ESTIMATED EMISSIONS (tons)		0.60	1.28	0.12	0.11	0.18	0.14
Emission factors based on US Department of Homeland Security modeling, which used EPA's NONROAD2005 model							
Hours of use based on estimates from Steve Weed, MILCON Project Programmer, 75 CEG/CENP							

Table 5: Heavy Equipment Emissions, Construct USAF Consolidated Training Center

Data Assumptions							
Equipment Type	Emission Factor (lb/hr)						
	CO	NOx	PM-10	PM-2.5	SO ₂	VOC	
Diesel Water Truck	1.37	3.63	0.27	0.26	0.49	0.29	
Diesel Road Compactors	0.33	1.08	0.07	0.07	0.16	0.08	
Diesel Paver	0.33	1.08	0.07	0.07	0.16	0.08	
Diesel Dump Truck	1.37	3.63	0.27	0.26	0.49	0.29	
Diesel Excavator	0.86	3.04	0.21	0.21	0.49	0.22	
Diesel Trenchers	0.94	2.24	0.18	0.17	0.29	0.20	
Diesel Bore/Drill Rigs	1.51	4.73	0.33	0.32	0.48	0.40	
Diesel Cement & Mortar Mixers	1.53	4.81	0.32	0.31	0.48	0.40	
Diesel Cranes	0.50	2.21	0.13	0.13	0.28	0.17	
Diesel Graders	0.90	3.13	0.22	0.21	0.49	0.23	
Diesel Tractors/Loaders/Backhoes	1.81	1.59	0.30	0.29	0.21	0.41	
Diesel Bull Dozers	0.91	3.15	0.22	0.21	0.49	0.24	
Diesel Front End Loaders	1.03	3.31	0.23	0.22	0.49	0.25	
Diesel Fork Lifts	1.71	1.89	0.31	0.30	0.21	0.44	
Diesel Generator Set	0.33	0.53	0.06	0.06	0.07	0.11	
Construct NOSC Training Facility							
EQUIPMENT TYPE	HOURS OF USE	Emissions (lb)					
		CO	NOx	PM-10	PM-2.5	SO ₂	VOC
Diesel Water Truck	24	32.9	87.1	6.5	6.3	11.7	7.0
Diesel Road Compactors	24	7.8	25.9	1.8	1.7	3.9	2.0
Diesel Paver	52	17.0	56.2	3.9	3.8	8.5	4.2
Diesel Dump Truck	434	594.2	1575.9	117.7	114.8	212.4	126.3
Diesel Excavator	233	200.3	708.9	49.3	47.8	114.0	52.4
Diesel Trenchers	152	143.1	340.7	27.0	25.8	43.4	29.9
Diesel Bore/Drill Rigs	20	30.3	94.6	6.6	6.5	9.7	7.9
Diesel Cement & Mortar Mixers	32	49.1	154.1	10.2	9.9	15.4	12.9
Diesel Cranes	14	7.0	30.9	1.8	1.8	3.9	2.4
Diesel Graders	77	69.3	240.9	16.8	16.3	37.7	17.8
Diesel Tractors/Loaders/Backhoes	382	691.4	608.0	115.4	112.0	80.0	155.8
Diesel Bull Dozers	22	20.1	69.3	4.8	4.7	10.8	5.2
Diesel Front End Loaders	30	30.8	99.2	6.9	6.7	14.7	7.5
Diesel Fork Lifts	10	17.1	18.9	3.1	3.0	2.1	4.4
Diesel Generator Set	20	6.6	10.5	1.3	1.3	1.4	2.1
TOTAL ESTIMATED EMISSIONS (lb)		1916.9	4121.0	373.1	362.4	569.7	437.9
TOTAL ESTIMATED EMISSIONS (tons)		0.96	2.06	0.19	0.18	0.28	0.22
Emission factors based on US Department of Homeland Security modeling, which used EPA's NONROAD2005 model							
Hours of use based on estimates from Steve Weed, MILCON Project Programmer, 75 CEG/CENP							

Table 6: Heavy Equipment Emissions, Construct NOSC Training Facility

Data Assumptions							
Equipment Type	Emission Factor (lb/hr)						
	CO	NOx	PM-10	PM-2.5	SO ₂	VOC	
Diesel Water Truck	1.37	3.63	0.27	0.26	0.49	0.29	
Diesel Road Compactors	0.33	1.08	0.07	0.07	0.16	0.08	
Diesel Paver	0.33	1.08	0.07	0.07	0.16	0.08	
Diesel Dump Truck	1.37	3.63	0.27	0.26	0.49	0.29	
Diesel Excavator	0.86	3.04	0.21	0.21	0.49	0.22	
Diesel Trenchers	0.94	2.24	0.18	0.17	0.29	0.20	
Diesel Bore/Drill Rigs	1.51	4.73	0.33	0.32	0.48	0.40	
Diesel Cement & Mortar Mixers	1.53	4.81	0.32	0.31	0.48	0.40	
Diesel Cranes	0.50	2.21	0.13	0.13	0.28	0.17	
Diesel Graders	0.90	3.13	0.22	0.21	0.49	0.23	
Diesel Tractors/Loaders/Backhoes	1.81	1.59	0.30	0.29	0.21	0.41	
Diesel Bull Dozers	0.91	3.15	0.22	0.21	0.49	0.24	
Diesel Front End Loaders	1.03	3.31	0.23	0.22	0.49	0.25	
Diesel Fork Lifts	1.71	1.89	0.31	0.30	0.21	0.44	
Diesel Generator Set	0.33	0.53	0.06	0.06	0.07	0.11	
Demolish Buildings 250, 816, 1221, 1231, and 1279							
EQUIPMENT TYPE	HOURS OF USE	Emissions (lb)					
		CO	NOx	PM-10	PM-2.5	SO ₂	VOC
Diesel Water Truck	11	15.1	39.9	3.0	2.9	5.4	3.2
Diesel Road Compactors	8.5	2.8	9.2	0.6	0.6	1.4	0.7
Diesel Paver	5.5	1.8	5.9	0.4	0.4	0.9	0.4
Diesel Dump Truck	11	15.1	39.9	3.0	2.9	5.4	3.2
Diesel Excavator	0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Trenchers	0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Bore/Drill Rigs	0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Cement & Mortar Mixers	0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Cranes	0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Graders	5.5	4.9	17.2	1.2	1.2	2.7	1.3
Diesel Tractors/Loaders/Backhoes	17	30.8	27.1	5.1	5.0	3.6	6.9
Diesel Bull Dozers	0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Front End Loaders	5.5	5.6	18.2	1.3	1.2	2.7	1.4
Diesel Fork Lifts	0	0.0	0.0	0.0	0.0	0.0	0.0
Diesel Generator Set	0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL ESTIMATED EMISSIONS (lb)		76.0	157.5	14.6	14.2	22.0	17.1
TOTAL ESTIMATED EMISSIONS (tons)		0.04	0.08	0.01	0.01	0.01	0.01
Emission factors based on US Department of Homeland Security modeling, which used EPA's NONROAD2005 model							
Hours of use based on estimates from Steve Weed, MILCON Project Programmer, 75 CEG/CENP							

Table 7: Heavy Equipment Emissions for Demolition

Asbestos: Buildings 250, 816, 1221, 1231, and 1279, which may contain asbestos, would be demolished as part of the proposed action. Prior to beginning any asbestos abatement efforts, a notification of at least 10 working days would be provided to DAQ, if required. Because all work would be performed in accordance with standards set by EPA, DAQ, and OSHA, there would be no effects to air quality associated with asbestos abatement. Additional details for asbestos abatement are provided in Section 4.2.2.2.

Direct Effects Due to Operations

The proposed action would replace existing operations. There would be no process-related air emissions for the proposed training activities. Air emissions would be created due to space heating during the winter months.

Based on discussions with the MILCON project programmer, space heating during the winter months would be provided by an on-site natural gas fired heating system. Calculated air emissions for space heating are shown in Table 8. These values are greater than the values presented in Tables 3 and 4 for the existing facilities, but still remain under one ton per year for each pollutant.

Data Assumptions						
Equipment Type	Natural Gas Emission Factor (pounds/MMSCF)					
	VOC	CO	NOx	PM10	HAPs	SOx
Natural Gas Furnace	5.5	40.0	94.0	7.6	0.01	0.6
Conversion Factors						
	Calculate Annual Fuel Consumption					
	VOC	CO	NOx	PM10	HAPs	SOx
Square Feet	106,000	106,000	106,000	106,000	106,000	106,000
BTU per hour per square foot	30	30	30	30	30	30
Heating hours per year	5,000	5,000	5,000	5,000	5,000	5,000
Million BTU per year	15,900	15,900	15,900	15,900	15,900	15,900
MMSCF per year	15.5	15.5	15.5	15.5	15.5	15.5
Heat New Training Facilities						
Equipment Type	Natural Gas Emissions (pounds)					
	VOC	CO	NOx	PM10	HAPs	SOx
Natural Gas Furnace	85	619	1454	118	0.2	9
TOTAL ESTIMATED EMISSIONS (pounds/year)	85	619	1454	118	0.2	9
TOTAL ESTIMATED EMISSIONS (tons/year)	0.04	0.31	0.73	0.06	0.00	0.00
<i>Notes:</i>						
MMSCF = Million Standard Cubic Feet						
BTU = British Thermal Unit						
1 cubic foot natural gas = 1,028 BTU						
Source: http://www.eia.doe.gov/kids/energyfacts/science/energy_calculator.html#natgascalc						
Office Space (as opposed to warehouse space): 15-45 BTU per hour per square foot						
There are approximately 5,000 heating hours in an average year						
Source: Dale R. Scott, P.E., SAIN Engineering Associates, Inc., 75CES/CEEE, Hill AFB, UT						
Assume 30 BTU per hour per square foot						
Emission factors: EPA values for residential furnaces						
For natural gas, SOx assumed equal to SO2						

Table 8: Predicted Air Emissions Due to Space Heating

Prior to operating the proposed action, Hill AFB air quality managers would submit notices of intent, seven day notifications, and modification requests to DAQ. Hill AFB would not be

allowed to operate the facilities until DAQ concurs that federal and state requirements are being met, and an administrative amendment to the Hill AFB Title V Operating Permit is granted.

Conformity Applicability Determination

Due to local non-attainment status, a conformity applicability determination (compliant with 40 CFR 93.153 and UAC R-307-115) was completed for the proposed action. The proposed action would be required to demonstrate conformity with the CAA unless an applicability determination shows that it is exempt from conformity, in this case, due to having annual emissions below the thresholds established in 40 CFR 93.153(b)(1) and (b)(2). Predicted air emissions due to construction and due to operations were all much less than the established threshold values.

Indirect Effects

During scoping and the detailed analysis, no indirect effects related to air quality were identified for the proposed action.

Cumulative Effects

Construction: Construction-related air emissions would be limited to a duration of several months per structure, which based on projected MILCON schedules, would not be built concurrently. Comparing the magnitude of predicted construction-related air emissions (Tables 5 through 7) to existing emissions for Hill AFB, Davis and Weber Counties (Table 2), there would not be significant cumulative effects to air quality associated with constructing the proposed action.

Operations: Hill AFB air quality managers would ensure that long-term operation of the proposed action complies with the Hill AFB Title V Operating Permit, any relevant approval orders, EPA regulations, and the Utah SIP. Any required air quality control devices would be installed and tested prior to allowing newly installed equipment to begin operating. Comparing the magnitude of predicted operational air emissions (Table 8) to existing emissions for Hill AFB, Davis and Weber Counties (Table 2), no significant cumulative effects to air quality were identified for operating the proposed action.

4.2.2 Predicted Effects to Solid and Hazardous Waste

4.2.2.1 Alternative A: No Action

Under the no action alternative, the wastes discussed in Section 3.3.2 would continue to be generated. With respect to solid and hazardous waste, the no action alternative would have no other direct effects, no indirect effects, and no cumulative effects.

4.2.2.2 Alternative B: Proposed Action - Construct Training Facilities

Direct Effects Due to Construction

Waste Generation: During the proposed construction activities, solid wastes expected to be generated would be construction debris consisting mainly of concrete, metal, and building materials. These items would be treated as uncontaminated trash and recycled when feasible. It is possible that equipment failure or a spill of fuel, lubricants, or construction-related chemicals could generate solid or hazardous wastes. In the event of a spill of regulated materials, Hill AFB environmental managers and their contractors would comply with all federal, state, and local spill reporting and cleanup requirements.

Waste Management: Hill AFB personnel have specified procedures for handling construction-related solid and hazardous wastes in their engineering construction specifications. The procedures are stated in Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection. All solid non-hazardous waste is collected and disposed or recycled on a routine basis. Hazardous wastes are stored at sites operated in accordance with the requirements of 40 CFR 265. The regulations require the generator to characterize hazardous wastes with analyses or process knowledge. Suspect waste is labeled as hazardous waste and is safely stored while analytical results are pending or until sufficient generator knowledge is obtained. Hazardous wastes are eventually labeled, transported, treated, and disposed in accordance with federal and state regulations.

Demolition Debris: Asbestos and lead-based paint (LBP) would be abated in accordance with federal, state, and local regulations. First, a detailed asbestos/LBP inspection would be performed by the Hill AFB asbestos/LBP shop (75 CES/CEOHA) technicians, and the results incorporated into project specifications. Each bidder would be pre-approved by 75 CES/CEOHA as qualified to perform asbestos/LBP abatement projects. Both the company and each individual worker must possess all required certifications to perform the specified tasks. Prior to beginning work, abatement contractors would provide an asbestos/LBP work plan to 75 CES/CEOHA for approval. 75 CES/CEOHA would conduct pre and post-abatement inspections of all work.

Any asbestos detected during the detailed asbestos inspection and subsequently removed during an abatement action, would be disposed in accordance with permit requirements at a disposal facility that is approved to accept both non-friable and friable asbestos. Loose flakes of lead-based paint (confirmed to contain lead by on-site inspections using a portable X-ray fluorescence analyzer) would be scraped, collected, and properly disposed at a permitted hazardous waste disposal facility. Prior to shipping any hazardous waste off base, the Hill AFB Hazardous Waste Control Facility (HWCF) manager would be contacted to coordinate signatures on waste manifests and to track shipments for reporting purposes. Dielectric fluid from any transformers or light ballasts suspected of containing PCBs would be tested, and the equipment would be properly disposed as either a regulated waste (PCB content of 50 parts per million [ppm] or more) or as uncontaminated trash (PCB content less than 50 ppm).

The uncontaminated demolition debris and LBP that is still affixed to surfaces would be handled in accordance with OSHA regulations. These materials must pass a toxicity characteristic

leaching procedure (TCLP) analysis prior to being disposed at a local construction debris (Class VI) landfill. Any surfaces with LBP still affixed and above the TCLP threshold would be disposed as hazardous waste. Class VI landfills are allowed to accept construction and demolition waste, including: LBP affixed to surfaces, and a quantity of 10 PCB-containing light ballasts per structure.

Thermostats that contain mercury switches would be collected by Hill AFB technicians from the facility systems flight (75 CES/CEOFSH) prior to demolition activities. Any thermostats not saved for local reuse would be delivered to DRMO, which has an office on Hill AFB. DRMO would send the thermostats to be recycled, and a waste stream would not be created.

Any asphalt pavements surrounding the structures would be removed, collected, and would either be recycled, or stored and made available for reuse during future Hill AFB construction projects.

Excavated Soils: There is no known soil contamination at the location of the proposed action. However, excavations could potentially encounter contaminated soil. If unusual odors or soil discoloration were to be observed during any excavation or trenching necessary to complete the proposed action, the soil would be stored on plastic sheeting and the Hill AFB Environmental Restoration Branch (75 CEG/CENR) would be notified. Any excess clean soil would either be used as fill for another on-site project or placed in the Hill AFB landfill. Any soil determined to be hazardous would be eventually labeled, transported, treated, and disposed in accordance with federal and state regulations. No soil would be taken off base without prior 75 CEG/CENR written approval.

Direct Effects Due to Operations

Based on information received during the scoping meeting and subsequent discussions with the proponent, the types of solid and hazardous wastes to be generated due to operating the proposed action would be the same as for the existing facility.

Indirect Effects

During scoping and the detailed analysis, no indirect effects related to solid and hazardous waste were identified for the proposed action.

Cumulative Effects

Proper handling of solid and hazardous waste eliminates releases of contaminants to the environment or reduces such releases in conformity with legal limits. There would be no significant cumulative solid or hazardous waste effects associated with the proposed action.

4.2.3 Predicted Effects to Water Quality

4.2.3.1 Alternative A: No Action

Under the no action alternative, effects to water quality would remain as discussed in Section 3.3.3. With respect to water quality, the no action alternative would have no other direct effects, no indirect effects, and no cumulative effects.

4.2.3.2 Alternative B: Proposed Action - Construct Training Facilities

Direct Effects Due to Construction

Based on information provided by Hill AFB engineers, the land area to be disturbed by the proposed facility would be approximately eight acres in size. The proposed action would be covered under Utah's general construction permit rule for stormwater compliance. Prior to initiating any construction activities, this permit must be obtained and erosion and sediment controls must be installed according to a stormwater pollution prevention plan (SWPPP). The SWPPP would specify measures to prevent soil from leaving the construction site on the wheels of construction vehicles, thereby controlling the addition of sediments to the storm drain system. The proponents would coordinate with the Hill AFB water quality manager (75 CEG/CENE) prior to submitting an application for a Utah construction stormwater permit.

Design engineers would ensure that components of the existing stormwater collection system would not be damaged, by avoiding or relocating the relevant structures. Hill AFB construction specifications would require the contractor to restore the land to a non-erosive condition. All areas disturbed by excavation would be backfilled, and then either be covered by pavements, gravel, or re-planted, re-seeded, or sodded to prevent soil erosion.

Since the proposed action would convert a small area occupied by open land to impermeable surfaces, some increased stormwater runoff volume would be expected unless runoff controls were to be created during construction of the facility. EISA Section 438 specifies stormwater runoff requirements for federal development projects. The sponsor of any development or redevelopment project involving a federal facility with a footprint that exceeds 5,000 ft² must ensure that all precipitation from the 95th percentile, 24-hour storm event is retained on site (for Hill AFB, this storm depth is 0.8 inches [Zautner 2010]). Compliance with this requirement (by designing and constructing detention and/or retention structures) would eliminate downstream effects due to creating impermeable surfaces.

Depth to groundwater is approximately 35 feet bgs in the vicinity of proposed action. Since the proposed action would not require excavations deeper than approximately ten feet bgs (for footings, foundations, and on-site utilities), no direct groundwater effects were identified for the proposed action.

Direct Effects Due to Operations

The proposed facility would be subject to Utah's multi-sector general permit for industrial facilities. The *Hill AFB Stormwater Management Program - Municipal Stormwater Permit*

establishes good housekeeping measures and other best management practices to prevent contamination of runoff.

Indirect Effects

As discussed in Section 3.3.4, the proposed action would be located within a DWSP area. Potential contamination sources such as oil and grease from vehicles, and agricultural chemicals from landscaped areas would be controlled. Facility design and operating standards would be based on good housekeeping measures such as street sweeping and controlling litter, and other best management practices such as cleaning, inspecting, and maintaining the stormwater collection system. The proposed action would not create any industrial sources of contamination.

Cumulative Effects

Water quality would be protected during construction and operations. There would be no significant cumulative water quality effects associated with the proposed action.

4.3 Summary Comparison of Predicted Environmental Effects

This section only applies to the alternatives considered in detail.

Issue	Alternative A No Action	Alternative B Proposed Action
Air Quality	Existing air emissions are 0.24 tons per year or less for each criteria pollutant as well as for HAPs.	Qualified asbestos abatement contractors would prevent impacts to air quality. Construction equipment would create temporary emissions. Fugitive dust would be controlled. Air emissions from operations would be less than 0.8 tons per year for each criteria pollutant as well as for hazardous air pollutants (HAPs). Conformity with the Clean Air Act was demonstrated.
Solid and Hazardous Waste	Only non-regulated wastes exist; if not recyclable, they are collected and disposed.	If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facilities.
Water Quality	Good housekeeping measures and other best management practices are being followed.	During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Good housekeeping measures and other best management practices would be incorporated into facility design and operations.

Table 9: Summary Comparison of Predicted Environmental Effects

5.0 LIST OF PREPARERS

Streamline Consulting, LLC

1713 N. Sweetwater Lane, Farmington UT 84025

Randal B. Klein, P.E., Project Manager, (801) 451-7872

Civil Engineer Group, Environmental Quality Branch, 75 CEG/CENE

7274 Wardleigh Road, Hill AFB UT 84056

Sam Johnson, EIAP Manager, (801) 775-3653

6.0 LIST OF PERSONS AND AGENCIES CONSULTED

Civil Engineer Group, Environmental Quality Branch, 75 CEG/CENE

7274 Wardleigh Road, Hill AFB UT 84056

Sam Johnson, EIAP Manager, (801) 775-3653

Jaynie Hirschi, Archaeologist, (801) 775-6920

Russ Lawrence, Natural Resources Manager, (801) 777-6972

Justin Beard, Hazardous Waste Control Facility Manager, (801) 586-8537

Civil Engineer Organizations, 75 CEG and 75 CES

5713 Lahm Lane, Building 593N, Hill AFB UT 84056

Steven Weed, MILCON Project Programmer, (801) 777-2580

David Lund, Energy Engineer, (801) 777-3560

Nick King, Asbestos/Lead Based Paint Acting Supervisor, (801) 777-8006

Air Force Sustainment Center, AFSC OL DPH

6092 Fir Lane, Building 1231, Hill AFB UT 84056

John Sowder, Training Manager, (801) 775-3427

Naval Facilities Engineering Command Southwest, NAVFAC SW ESWD

1220 Pacific Highway, San Diego CA 92132

Kurosh Raoufpor, Deputy Public Works Officer, (619) 532-1380

Mercy Hahne, Reserves and Special Areas Planner, (619) 532-4210

Cardno EM-Assist, Inc.

7274 Wardleigh Road, Hill AFB UT 84056

Mark Kaschmitter, Air Regulatory Analysis, (801) 775-2359

CH2M HILL, Inc.

7274 Wardleigh Road, Hill AFB UT 84056

Sara Van Klooster, Air Emissions Inventory, (801) 775-5173

7.0 REFERENCES

AFCEE 2005: *Environmental Impact Analysis Process Desk Reference*, AFCEE, July, 2005.

CFR: *Code of Federal Regulations*, US Government Printing Office, Office of the Federal Register, current versions, which are located at:

<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=%2Findex.tpl>

29 CFR 1910, *Occupational Safety And Health Standards*

32 CFR 989, *Environmental Impact Analysis Process*

40 CFR 265, *Interim Status Standards For Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities*

40 CFR 1500-1508, *Council on Environmental Quality*

40 CFR 93.154, *Determining Conformity of Federal Actions to State or Federal Implementation Plans*

CH2M 2008: *2008 Five-Year Review for Hill Air Force Base*, CH2M HILL, December, 2008.

CH2M 2009: *Final Analytical Data Validation Report for the Fall 2008 Operable Unit 9 Groundwater Monitoring Well Sampling Round*, CH2M HILL, March, 2009.

CH2M 2013: Spreadsheet provided by Hill AFB contractor CH2M HILL, February, 2013.

CNIC 2011: *Global Shore Infrastructure Plan, NOSC Addendum*, Commander Navy Installations Command, June, 2011.

DAQ 2013: *Division of Air Quality Annual Report for 2012*, Utah Division of Air Quality, 2013.

DOD 2007: *DOD Minimum Antiterrorism Standards for Buildings*, DOD, January, 2007.

EPA 2004: *AP-42, Compilation of Air Pollutant Emission Factors (Section 11.1.2.5)*, USEPA, March, 2004.

Hill AFB: *Construction Specifications, Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection*, Hill AFB, UT, current version.

Hill 2007a: *Integrated Cultural Resources Management Plan*, Hill AFB, 2007.

Hill 2007b: *Integrated Natural Resources Management Plan*, Hill AFB, 2007.

Hill 2008: *Updated Drinking Water Source Protection Plan, Hill AFB Well 5*, Hill AFB, May, 2008.

Hill 2012a: *Spill Prevention Control and Countermeasures (SPCC) Plan for Hill Air Force Base*, Hill AFB, April, 2012.

Hill 2012b: *Operable Unit 11 Fact Sheet*, Hill AFB, May, 2012.

Hill 2012c: *Hill AFB General Plan*, Hill AFB, 2012.

Hill 2012d: *2011 Annual Criteria and Toxic Pollutant Emission Inventory*, Hill AFB, prepared by CH2M HILL, April, 2012.

Stantec 2011: *Hill AFB Stormwater Management Program - Municipal Stormwater Permit*, Stantec Consulting, August, 2011.

USAF 2009: *Air Force Demolition Policy*, USAF, March, 2009.

WFRC 2003: *Natural Hazard Pre-Disaster Mitigation Plan, Utah's Wasatch Front*, Wasatch Front Regional Council, December, 2003.

Zautner 2010: *Hill AFB 95th Percentile 24-hour Precipitation Amount*, Jeffrey H. Zautner, Meteorologist, Air Force Combat Climatology Center, June 10, 2010.

APPENDIX A

CULTURAL RESOURCES FINDING OF NO ADVERSE EFFECT



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of Heritage and Arts

Julie Fisher
Executive Director

State History

Wilson G. Martin
Director

April 11, 2013

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEB/CENE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

RE: Demolition of Buildings 816, 250, 1221 and 1231, Hill Air Force Base, Davis County, Utah

In reply please refer to Case No. 13-0380

Dear Dr. Martone:

The Utah State Historic Preservation Office received your submission and request for our comment on the above-referenced project on April 3, 2013. Based on the information provided to our office, we concur with the finding that No Historic Properties Affected will be affected for the proposed undertaking.

This information is provided to assist with Section 106 responsibilities as per §36CFR800. If you have questions, please contact me at clhansen@utah.gov or 801-245-7239.

Regards,

A handwritten signature in blue ink, appearing to read "C. Hansen".

Chris Hansen
Preservation Planner/Deputy SHPO



DEPARTMENT OF THE AIR FORCE
75TH CIVIL ENGINEER GROUP (AFMC)
HILL AIR FORCE BASE UTAH

2 April 2013

Dr. Joseph A. Martone
Chief, Environmental Quality Branch
75 CEG/CENE
7274 Wardleigh Road
Hill Air Force Base Utah 84056-5137

Mr. Chris Hansen
State Historic Preservation Office
300 Rio Grande
Salt Lake City Utah 84101

Dear Mr. Hansen

Hill Air Force Base (Hill AFB) is currently proposing to construct new training facilities in Davis County, Utah. The Area of Potential Effect (APE) is 12.3 acres (Attachment 1). The purpose of the construction is to consolidate and provide facilities that meet current mission and force protection requirements. Hill AFB has determined the proposed project constitutes an undertaking as defined in 36 CFR §800.16(y).

To facilitate the new construction, five buildings are proposed for demolition. Building 816 was constructed in 1979 and is not yet historic. Buildings 250, 1221, and 1231 were constructed between 1941 and 1943 and have been determined ineligible for listing on the National Register of Historic Places (NRHP). Building 1279 has been determined eligible for listing on the NRHP, but was previously mitigated for demolition in 2008 (West Side Development, Enhanced Use Lease – Hill AFB, UT).

Within Hill AFB, three previous inventories have comprised cultural resources survey of 840 acres (U-91-WC-687m, U-95-WC-280p, and U-01-HL-164m). Results from these projects include the recordation of one historic refuse dump (42DV51) and two prehistoric isolates, all determined ineligible for listing on the NRHP. Inventory efforts have resulted in the survey of 12.5 percent of the total area of Hill AFB. None of the previous inventories fall within the current proposed project APE.

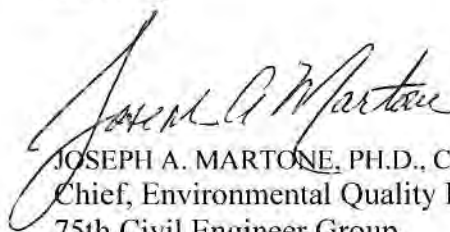
Associated building and infrastructure development will occur in the proposed project area. Given the lack of previous findings and the extensive development and disturbance of Hill AFB, the potential for archaeological historic properties is extremely low. However, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the

unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2).

In consideration of the above information, Hill AFB has determined the training facility construction and associated demolitions will have No Effect to historic properties [36 CFR §800.4(d)(1)]. We request your concurrence in this determination as specified in 36 CFR 800.4(d)(1)(i).

Should you or your staff have any questions about the proposed project, please contact Ms. Jaynie Hirschi, Archaeologist, AFCEC/CZO, at (801) 775-6920 or at jaynie.hirschi@hill.af.mil.

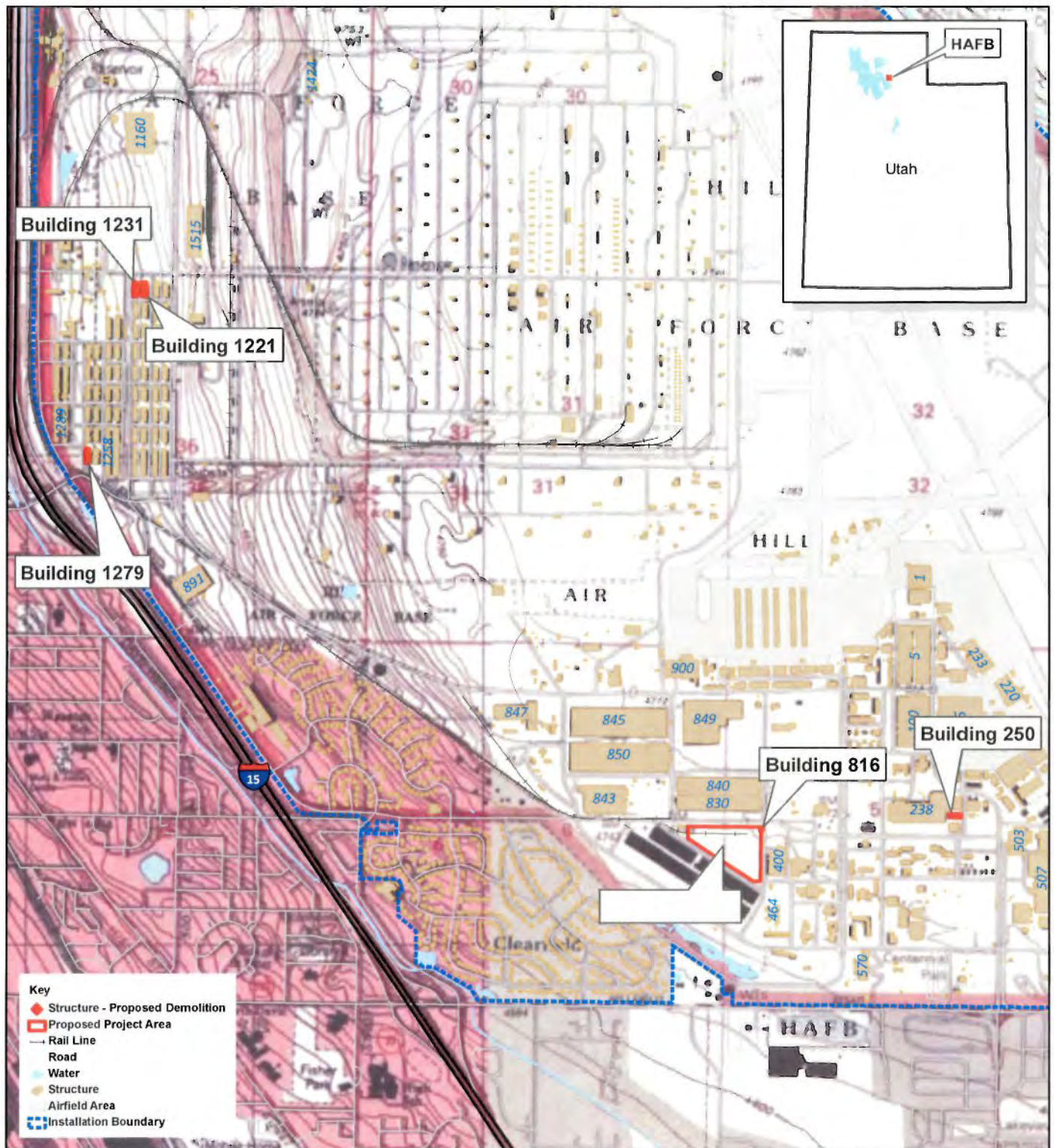
Sincerely

A handwritten signature in cursive script, reading "Joseph A. Martone".

JOSEPH A. MARTONE, PH.D., CIH, QEP, GS-13, DAF
Chief, Environmental Quality Branch
75th Civil Engineer Group

2 Attachments:

1. Location Map
2. Undiscovered Archaeological Deposits Procedures



Location of Proposed Site and
Buildings Planned for Demolition
Hill Air Force Base, Utah
Kaysville, UT 7.5' Quadrangle

Standard Operating Procedure

UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS

APPLICABLE LAWS AND REGULATIONS

- ◆ National Historic Preservation Act
- ◆ National Environmental Policy Act
- ◆ Native American Graves Protection and Repatriation Act
- ◆ AFI 32-7065 (June 2004), *Cultural Resources Management Program*

OVERVIEW

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- ◆ Undiscovered/undocumented structural and engineering features; and
- ◆ Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

POLICY

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

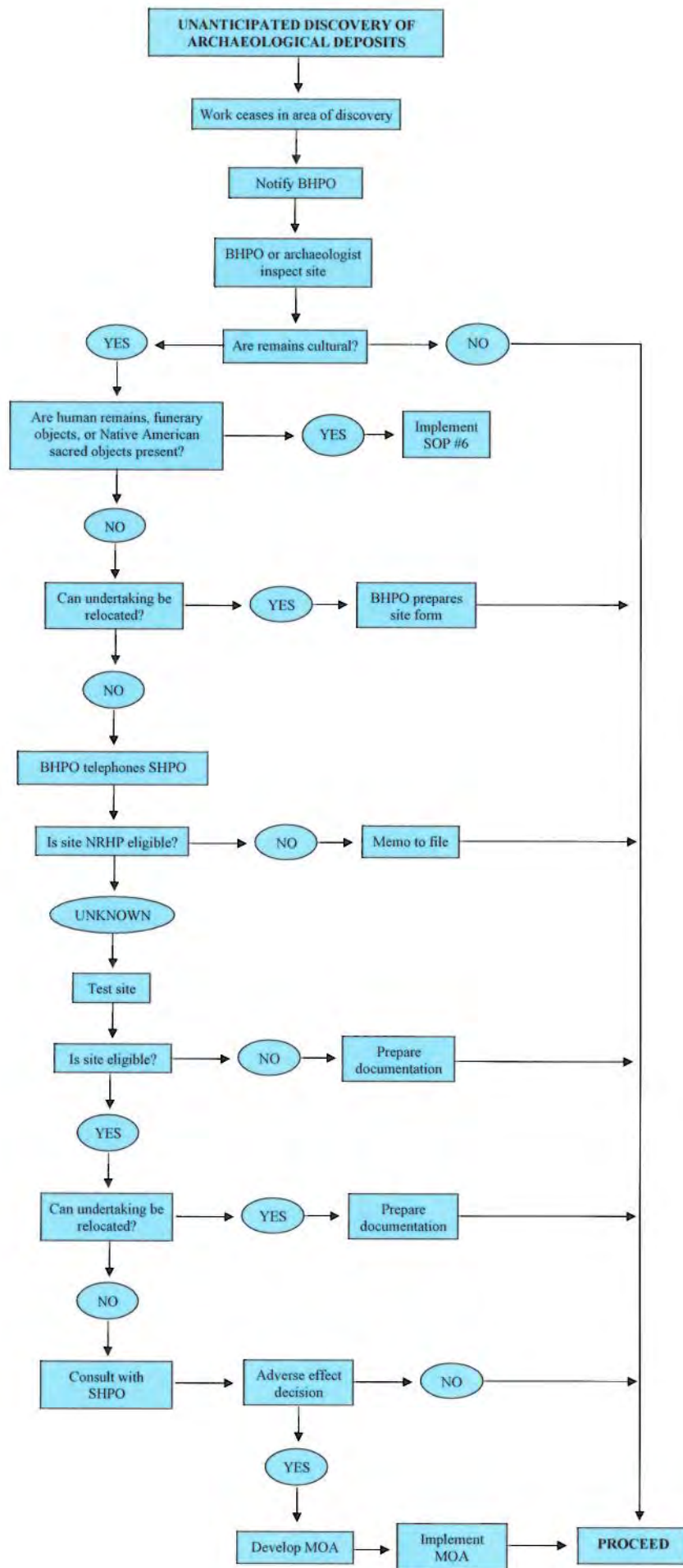
- ◆ Evaluate such deposits for NRHP eligibility.
- ◆ Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- ◆ Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- ◆ **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

PROCEDURE

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- ◆ The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.



FINDING OF NO SIGNIFICANT IMPACT

1. **NAME OF ACTION:** Proposed Training Facilities, Hill Air Force Base (AFB).
2. **DESCRIPTION OF THE PROPOSED ACTION:** Hill AFB proposes to construct training facilities for the United States Air Force (USAF) and United States Navy (USN). Hill AFB provides training related to repairing composite military aircraft. The USN trains reservists to maintain constant readiness for rapid deployment.

3. **SELECTION CRITERIA:**

The proposed action meets the following criteria:

- be adequately sized
- comply with Antiterrorism Force Protection (ATFP) requirements
- comply with *Global Shore Infrastructure Plan* (GSIP) Recommendations
- be located on one site (USAF) and near the population being served (USN)
- comply with the Hill AFB General Plan
- comply with federal, state, and local environmental regulations.

4. **ALTERNATIVES CONSIDERED:**

Alternative A: No Action

Under the no action alternative, new training facilities would not be constructed, and adequate facilities would not be provided. The existing facilities would operate as they currently exist.

Alternative B: Proposed Action

The training facilities would be constructed, to include three USAF 23,000 square foot each, two-story buildings (constructed in phases) with structural steel frames, reinforced concrete foundations, concrete floor slabs, mechanical and electrical systems, water and fire protection systems, and communications networks; one USN 37,000 square foot single-story building with a structural steel frame, reinforced concrete foundations, concrete floor slabs, mechanical and electrical systems, water and fire protection systems, and communications networks; and connections to adjacent buried utilities for each facility. Five buildings would be demolished on Hill AFB in support of USAF's physical plant strategy, which calls for reducing net facility footprint by 20 percent between 2006 and 2020 by demolishing surplus and inefficient facilities.

Alternative C: Improve Existing Facilities

Planners considered expanding the existing training facilities in the same locations where they currently exist. In neither case could the minimum ATFP requirements for security and standoff distances be met, even if expanding vertically, because the existing standoff distances do not comply with ATFP requirements. The USN training facility would not comply with GSIP recommendations.

Alternative D: Construct Training Facilities Off Hill AFB

USAF considered leasing a facility located in Layton or one of the other several cities that surround Hill AFB. The minimum ATFP requirements for security and standoff distances could not be met.


USN considered constructing a new training facility at Dugway Proving Ground, Tooele Army Depot, Camp Williams, Deseret Chemical Depot, and the Utah Air National Guard Base. None of these locations complied with the GSIP recommendations and the criterion to be conveniently located relative to the population being served.

5. SUMMARY OF ANTICIPATED ENVIRONMENTAL EFFECTS:

This section only applies to the alternatives considered in detail.

Issue	Alternative A No Action	Alternative B Proposed Action
Air Quality	Existing air emissions are 0.24 tons per year or less for each criteria pollutant as well as for hazardous air pollutants (HAPs).	Qualified asbestos abatement contractors would prevent impacts to air quality. Construction equipment would create temporary emissions. Fugitive dust would be controlled. Air emissions from operations would be less than 0.8 tons per year for each criteria pollutant as well as for HAPs. Conformity with the Clean Air Act was demonstrated.
Solid and Hazardous Waste	Only non-regulated wastes exist; if not recyclable, they are collected and disposed.	If contaminated building materials, soils or pavements are identified, they would be properly handled during the demolition and construction process. Operational activities would generate the same types of waste as the existing facilities.
Water Quality	Good housekeeping measures and other best management practices are being followed.	During construction and operations, water quality would be protected by implementing stormwater management practices. Precipitation from the 95th percentile, 24 hour storm event would be retained on site. Good housekeeping measures and other best management practices would be incorporated into facility design and operations.

6. FINDING OF NO SIGNIFICANT IMPACT: Based on the above considerations, a finding of no significant impact (FONSI) is appropriate for this assessment.

Approved by: 
HARRY BRIESMASTER III, GS-15, DAF
Director, 75th Civil Engineer Group

Date: 8 Aug 2013